CLEAN ENERGY & CONSERVATION TOOLKIT KUKU GROUP RANCH



A Practical Guide for Community Leaders, Women's Groups, and Youth Champions CLEAN ENERGY & CONSERVATION TOOLKIT KUKU GROUP RANCH

Across the sweeping plains of Kuku Group Ranch, from the shade of acacia trees to the heart of our homesteads, change is taking root.

This toolkit is the product of shared dreams and grounded knowledge crafted by researchers, community members, and partners working hand in hand to explore how clean energy, forest conservation, and local leadership can shape a healthier, more hopeful tomorrow.

Through dialogue in village barazas, household visits, and school engagements, this work reflects not only data but the lived experiences of women, youth, elders, and leaders. It is a tool made by the community, for the community.

As we confront challenges like deforestation, energy poverty, and climate change, our response must be rooted in collaboration, courage, and culture. This toolkit offers pathways forward from cleaner stoves to protected wildlife corridors, from youth-led tree planting to village-wide land use planning.

Empowered communities require inclusive, well-adapted tools to make transformation possible. We believe that this toolkit is one such step.

A Practical Guide for Community Leaders, Women's Groups, and Youth Champions

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With support from: Nuvoni Centre for Innovation Research, MWCT, and the Community of Kuku Group Ranch.

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Foreword: From the Community and Partners

The journey toward a sustainable future in Kuku Group Ranch is rooted in the strength of its people the women who gather firewood with determination, the youth who dream of greener jobs, the elders who remember a land full of trees and wildlife, and the schools that nurture our next generation of stewards.

This toolkit is not just a guidebook, it is the story of our transition, written with the voices, hands, and hopes of our community. It captures the insights of mothers who seek safer stoves, of youth who plant trees and learn solar technology, and of local leaders who believe in balancing development with conservation.

Developed through close collaboration with researchers, community members, and partners including the LDE Thesis Lab and the Maasai Wilderness Conservation Trust, this resource is grounded in lived experience and scientific insight. It is designed to support action, not only by professionals and NGOs, but by everyday families, women's groups, schools, and barazas.

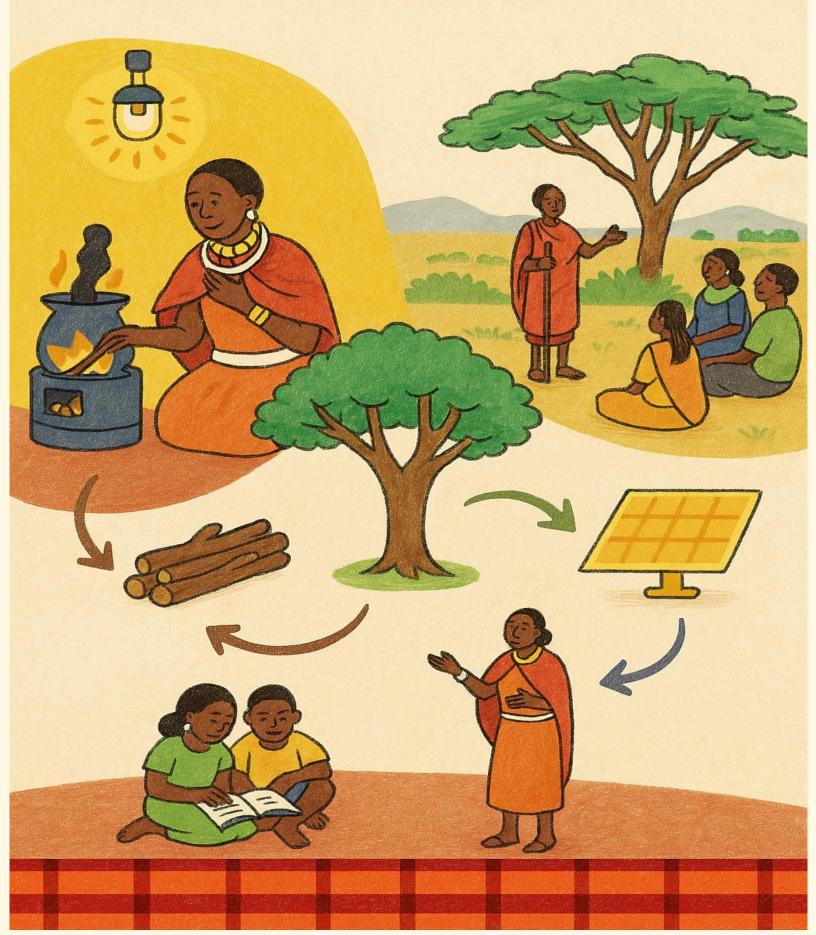
We believe clean energy is more than technology, it is dignity, health, time, and opportunity. Forest conservation is not only about trees, it is about protecting heritage, wildlife, and the climate that shapes our lives. This toolkit helps bring those ideals into action, step by step.

To everyone in Kuku who contributed stories, time, and wisdom, this is yours. Let us use it to educate, organize, and grow a community that is more resilient, more informed, and more united than ever before.

With gratitude and hope,

The People of Kuku Group Ranch Sharon Vintage Mwangi – LDE Thesis Lab MWCT – Maasai Wilderness Conservation Trust Nuvoni Centre for Innovation Research

Introduction





Section 1: Introduction – Why and How to Use the Toolkit

Why This Toolkit Matters

The Kuku Group Ranch is home to a vibrant and resilient community facing both opportunity and challenge. With increasing pressure on forests, rising energy demands, and climate variability threatening pastoral livelihoods, the need for sustainable solutions has never been more urgent. This toolkit responds to that need.

At its core, the toolkit is about empowering the Kuku community with the knowledge, tools, and practical strategies to transition from traditional, often harmful energy sources toward cleaner, safer, and more sustainable alternatives. It links the need for energy with the responsibility to protect local forests, water sources, and biodiversity, recognizing that environmental health and human well-being are deeply interconnected.

Clean energy is more than a technology upgrade, it is about healthier families, restored ecosystems, and freed-up time for economic and educational pursuits. It means reducing the daily burden on women and girls who collect firewood, minimizing indoor smoke that causes respiratory illness, and preserving tree cover that provides habitat for wildlife and resilience against drought.

Who This Toolkit is For

This toolkit is designed to be practical, inclusive, and adaptable. It has been developed through local input, guided by lived realities and grounded in field-based insights. It can be used by a wide range of community actors:

- 1) Community Facilitators and Leaders: to guide discussions during barazas, church gatherings, or community forums.
- 2) Women's and Youth Groups: to organize clean energy demonstrations, group projects, and tree-planting initiatives.
- 3) Schools and Environment Clubs: to teach young people about energy, conservation, and land use in a hands-on, culturally relevant way.
- 4) Local Government and NGO Staff: to engage in participatory planning, support monitoring, and coimplement initiatives with community groups.

How to Use This Toolkit

Each section is structured to make knowledge actionable. From simple observations to training modules, from illustrated activities to localized monitoring tools, the toolkit supports learning, planning, and doing.

You are encouraged to:

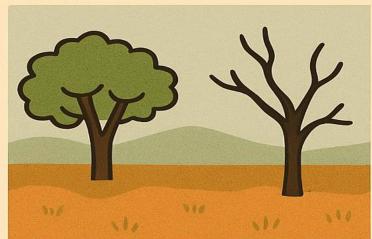
- a) Start where your group is most interested -whether it's energy use, woodlots, or land use.
- b) Adapt the tools to your context translate them, simplify language, add local stories or illustrations.
- c) Use it as a spark, not a script -build discussions, organize events, or create new group projects inspired by its contents.

Whether you are a mother cooking for your family, a youth leader dreaming of change, or a local chief seeking a better future for your people, this toolkit is yours to use, adapt, and share. Together, let's create a cleaner, greener, and stronger Kuku one household, one group, one village at a time.

ENERGY IN KUKU— WHAT'S HAPPENING?











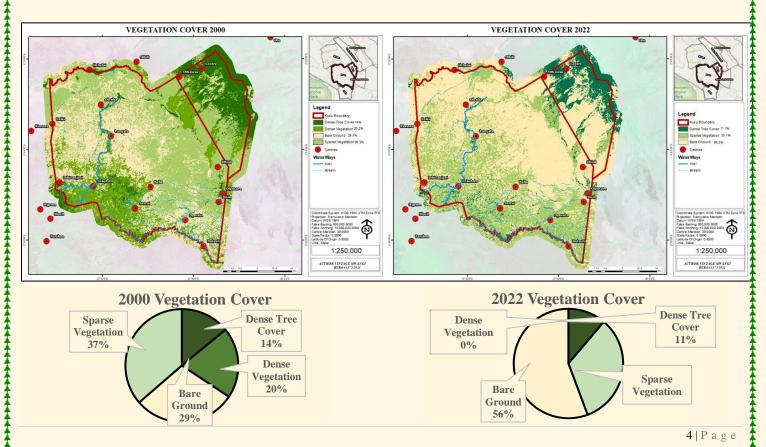
Section 2: Energy in Kuku – What's Happening?

1. Snapshot of Energy Use Today

In many households across Kuku Group Ranch, energy remains a daily challenge. Based on household surveys and field discussions, the majority of families continue to rely on traditional biomass sources to meet their energy needs.

- Firewood remains the primary fuel for cooking in over 83% of households, with many families collecting wood multiple times a week.
- Less than one in five homes have access to solar-powered lighting, such as lanterns or small solar panels. Most of these are used for basic needs like phone charging and lighting a single room.
- Use of cleaner fuels like LPG (gas) or biogas is rare, limited to a few institutions or households with greater income or livestock.
- Each family is estimated to cut 5 or more large logs daily for cooking, and schools often consume even more, especially when feeding many students.
- Over the past decade, tree cover has steadily decreased, while areas of bare ground are expanding leading to hotter, dustier conditions and reduced habitat for local wildlife.

These patterns indicate that energy in Kuku is still predominantly traditional and extractive, with limited access to renewable or modern alternatives.



2. Why This Matters

The way energy is accessed and used has wide-reaching consequences for households, women, health, and the environment.

- Health concerns are significant. The smoke from indoor cooking with firewood exposes women and children to high levels of air pollution, leading to persistent coughs, red eyes, and respiratory illness.
- Time lost is also a burden. Women and girls often spend more than 10 hours a week collecting firewood, time that could be used for school, rest, or income-generating activities.
- Deforestation is accelerating. With trees cut faster than they can regenerate, forests and bushes are thinning, and once-wooded landscapes are turning into bare, dusty fields. Wildlife is retreating, and the natural balance is under threat.
- The result is a cycle of energy poverty. Families are stuck using what is cheapest and available i.e. firewood even when they know the risks. Without support for better options, many cannot afford or access cleaner fuels.

3. A Moment for Change

This section sets the stage for why energy matters in Kuku not just for cooking, but for the health of our people, the safety of our children, and the survival of our land. It allows us to understand the current patterns and their impacts, and we can begin to make informed, community-led choices that lead toward a more sustainable future.

This toolkit provides tools, training, and stories to help make that transition possible from firewood to clean cooking, from darkness to solar lighting, from overharvested forests to community woodlots.

Section 3: TRAINING MODULES



Module 1 Using Solar Power



Improved
Cooking with
Briquettes
and Stoves



Starting and Caring for Community Woodlots



Module 4
Land Use Planing for Our Future



Section 3: Training Modules

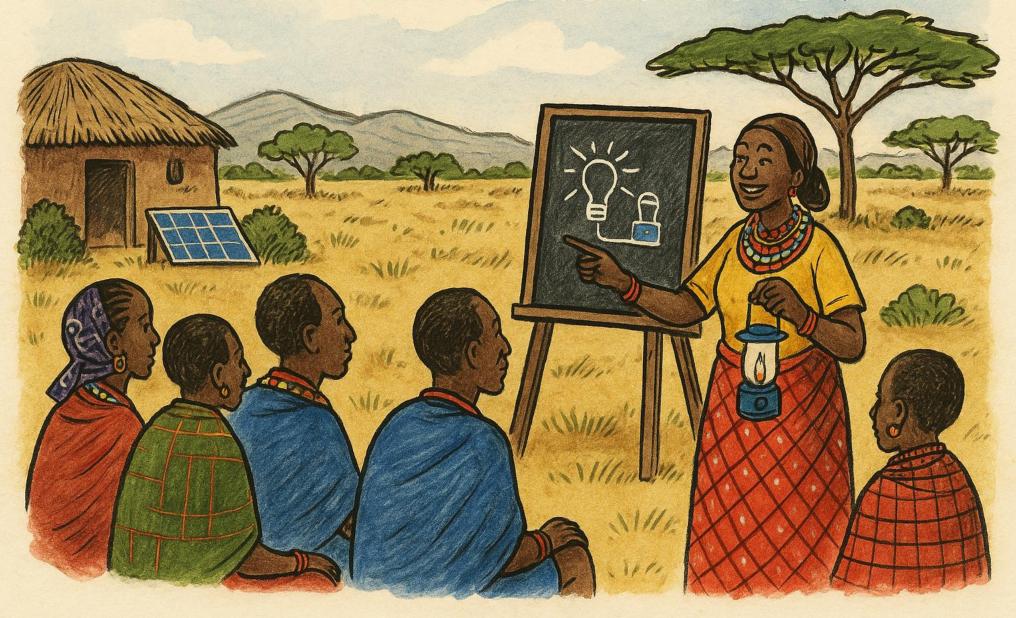
Overview

The training modules in this toolkit are designed to build practical skills, local knowledge, and shared ownership around clean energy, environmental conservation, and land use planning in Kuku Group Ranch. Each module includes hands-on activities that empower community members to learn by doing and facilitate peer-to-peer knowledge transfer.

These modules are intended for youth and women's groups, schools, local leaders, and facilitators. They can be delivered in informal barazas, workshops, school clubs, or household visits. The goal is to make important concepts like solar power, clean cooking, tree planting, and land use planning both relatable and actionable.

Each training is modular and adaptable, it can be taught as a one-time event or revisited and expanded over time. Community members thus begin to shift not only behaviors but also mindsets by participating in these sessions and taking the lead in designing their sustainable futures.

MODULE 1: USING SOLAR POWER



Module 1: Using Solar Power

This module introduces the community to the benefits and maintenance of solar power. It emphasizes how solar energy provides a safe, clean, and renewable alternative to kerosene lamps and firewood-based lighting.

Key Topics Covered:

- a) What solar systems can do: powering lights, radios, charging phones, and supporting school study hours.
- b) How to clean and maintain a solar panel: using soft cloth and water; keeping the panel angle optimal.

The module encourages discussion on where solar systems are already being used in the community and identifies champions who can teach others.

What Solar Systems Can Do

Solar energy can power many daily needs in off-grid communities. Even small solar home systems with a panel, battery, and inverter/controller can provide lighting, charge mobile phones, and power small appliances like radios or LED TVs. Using solar instead of kerosene lamps or diesel generators brings cleaner air (no smoke) and cost savings over time.

Suggested Activity (10 minutes): Ask participants to brainstorm all the ways they use energy at home, e.g, lighting, phone, radio, TV, refrigeration, etc. For each use, discuss whether solar power can meet that need. List their answers on a flipchart. This participatory discussion helps the group appreciate the range of applications for solar and reinforces that solar systems can power most basic household and community needs without pollution.

Facilitation Tips: During barazas or group meetings, use simple language and examples. You might bring a solar lantern or solar radio to demonstrate its brightness and functionality on the spot. Emphasize that Kuku's climate is ideal for solar. Also address any skepticism by sharing real success stories like the solar powered boreholes in schools and noting how solar reduces reliance on costly fuels. Ensure women and youth are included in the discussion.

How to Clean and Maintain a Solar Panel

Proper care of solar equipment is essential in the arid and semi-arid environment of Kuku. Even a thin layer of dust on a solar panel can block sunlight and reduce its power output. Regular cleaning of the panel's surface can improve energy production by around 15%. To maintain a solar panel:

- 1) Wipe off dust and debris gently: Use water and a soft cloth or sponge to clean the glass surface. Avoid abrasive brushes or harsh chemicals that could scratch or damage the panel. In Kuku's dry season, panels may need cleaning every month or two; during rains, nature provides some cleaning, but still inspect periodically.
- 2) Clean at the right time: It's best to clean panels in the early morning or late evening when they are cool. Cleaning a hot panel with cold water can crack the glass due to thermal shock. Also, avoid cleaning on very windy days to keep dust from immediately resettling or during midday heat.

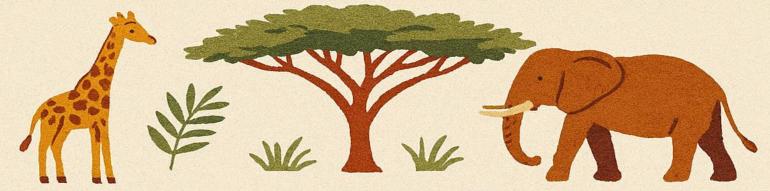
3) Check the installation: Ensure the panel is securely mounted, angled toward the sun, and not shaded by trees or buildings. Trim any vegetation that grows to cast shadows.

4) Maintain the battery and wiring: If the solar system includes a battery, check it regularly. For lead-acid batteries, ensure the terminals are clean and there's no corrosion; top up distilled water in unsealed batteries as needed. Make sure all cables are properly connected and insulated from moisture. A quick visual inspection of the panel and wiring each month can detect problems early.

Keep records: Note the dates of cleaning and any maintenance. This helps schedule the next cleaning and track performance changes.

Suggested Activity (15 minutes): Demonstrate panel cleaning. If possible, use a small solar panel that has accumulated dust. Show the correct technique: first gently dust off loose dirt, then wipe with a damp cloth. Involve participants by letting a volunteer do part of the cleaning. After cleaning, point the panel at the sun and, if you have a connected LED or multimeter, show the improved output. This hands-on demo reinforces proper maintenance.

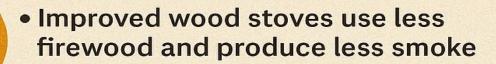
Facilitation Tips: Emphasize low-cost maintenance such as cleaning that mostly requires water and a rag, not expensive tools. During women's group meetings, relate panel cleaning to familiar household tasks. Remind the community that a well-maintained solar system can last many years, providing free energy in the long run.



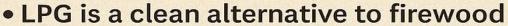
MODULE 2 CLEAN COOKING SOLUTIONS

Using cleaner stoves can help reduce smoke and save firewood.

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 Biogas turns animal waste into cooking fuel







Module 2: Improved Cooking with Briquettes and Stoves

This session compares traditional open-fire cooking with improved cookstoves that use less fuel and produce less smoke. Participants also learn about biomass briquettes as an alternative to raw firewood.

Key Topics Covered:

- a) Difference between traditional and improved stoves: safety, fuel efficiency, and health benefits.
- b) Live demonstration: Cook a basic meal (e.g., ugali) using an improved stove versus a traditional threestone fire.
 - a. Group task: Measure the amount of wood or briquettes used in each method, and calculate how much could be saved over one week or month.

This module is ideal for engaging women's groups and showcasing tangible benefits like time saved and smoke reduction.

Differences Between Traditional and Improved Stoves

Many families in Kuku currently cook on traditional three-stone fires or simple metal charcoal stoves. These traditional methods waste a lot of energy and produce a lot of smoke. Improved cookstoves are designed to burn fuel more efficiently and cleanly. In practice, this means an improved stove uses less wood or charcoal to cook the same amount of food, and creates less smoke and soot.

The key differences to highlight:

- 1) Fuel Efficiency: Traditional fires convert only about 10-15% of wood's energy into useful heat for the pot. Improved stoves often achieve 30-50% efficiency. For example, a well-known Kenyan improved wood stove model (Envirofit G3300) uses about 50% less fuel than an open fire to boil the same pot of ugali. This means if a family used to burn 6 kg of wood daily, they might only need about 3 kg with an improved stove hence saving wood and money.
- 2) Reduced Smoke and Health Benefits: Threestone fires produce a lot of smoke indoors, causing coughing and eye irritation, and



contributing to respiratory illnesses. Improved stoves are designed for more complete combustion and often have enclosed combustion chambers. This results in far fewer pollutants which means healthier lungs for the whole family, especially women and young children who spend time near the fire.

- 3) Safety: An open fire in the house can cause burns. Improved stoves are more stable and sometimes insulated on the outside, reducing the risk of serious burns.
- 4) Environment and Conservation: Because they use less fuel, improved stoves help reduce deforestation pressure. The community can thus cut firewood use by about a third to a half, meaning fewer trees need to be cut. Over time, this helps local forests and bushlands regenerate, preserving habitat for wildlife and maintaining ecosystem balance.

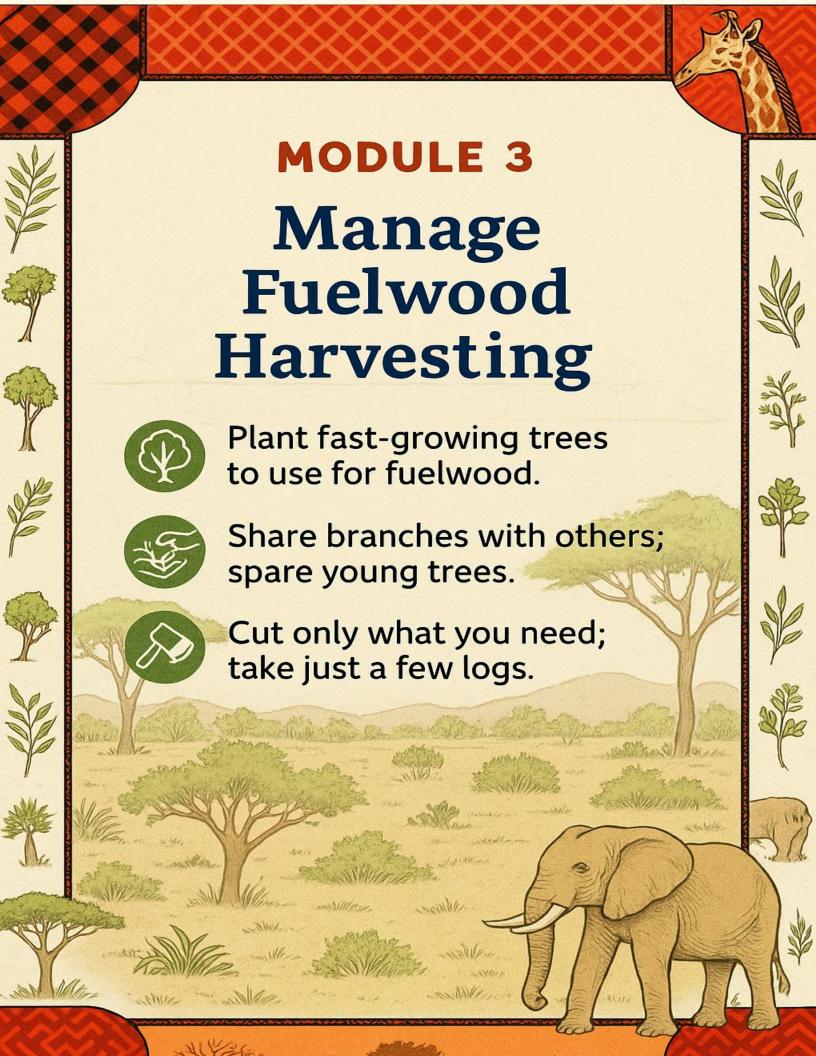
Live Demo: Cook Ugali

Participatory Activity (approx. 1 hour) – This live cooking demonstration vividly shows the fuel efficiency of improved stoves and briquettes. The goal is to cook a common meal using a traditional fire and an improved method side by side, and then compare fuel usage.

Setup: You will need two cooking stations outdoors or in a well-ventilated area; Station A: A traditional cooking setup, Station B: An improved cookstove. You will also need two identical pots and the ingredients to cook ugali and measuring tools: a scale to weigh firewood and briquettes.

Procedure:

- 1. Preparation: Weigh or count the fuel for each station.
- 2. Start cooking.
- 3. Monitor time and fuel.
- 4. Completion: Once the ugali is fully cooked, remove both pots from heat. Measure how much fuel is left and discuss with the participants.





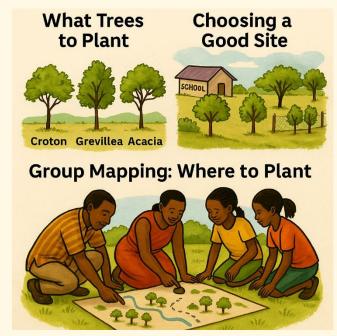
7 Module 3: Starting and Caring for Community Woodlots

This module promotes sustainable biomass production and reforestation by encouraging the creation of community woodlots.

Key Topics Covered:

- a) What trees to plant: fast-growing native species like Croton, Grevillea, and Acacia.
- b) Choosing a good site: nearby schools, churches, or open community spaces that allow for collective care.
- c) Group mapping exercise: Participants sketch a simple map of their village and identify zones where trees could be planted, protected, and maintained.

Facilitators can also introduce simple monitoring tools such as a seedling survival chart to help track progress over time.



What Trees to Plant

Establishing a community woodlot means selecting the

right mix of trees that will thrive in Kuku's climate and meet local needs. In the semi-arid conditions, it's crucial to choose drought-tolerant, hardy tree species that grow well with limited water, can be used for firewood/timber, and preferably also provide shade, fodder, fruits. Some recommended trees for Kuku and similar ASAL regions include indigenous Acacias, Melia volkensii (Mukau) and Fruit or Medicinal Trees such as Moringa.

Choosing a Site for the Woodlot

Selecting the right location for a community woodlot in Kuku is critical. Consider the following factors for site selection:

- a) Water availability
- b) Soil and terrain
- c) Protection from livestock and wildlife
- d) Community convenience

Group Mapping: Where to Plant

Participatory Activity (approx. 30 minutes) – This exercise gets everyone involved in visualizing and planning the woodlot location and layout. It's both creative and practical, allowing community members to draw their plans and agree on them.

Materials: Large paper e.g. flipchart or manila paper, or even the ground itself, markers or chalk, and possibly some symbols such as leaves, stones, sticks, if doing a ground map. If working with multiple small groups, each can have paper and markers.

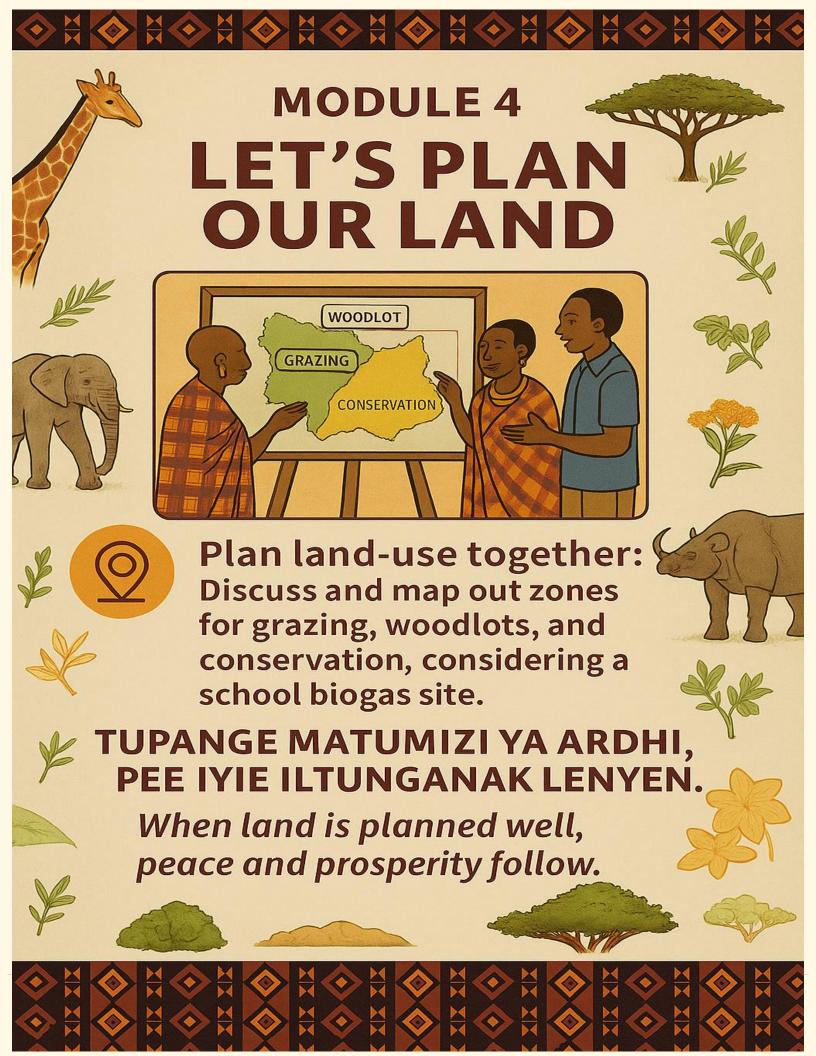
Steps:

- 1. Draw the Base Map: start by sketching key landmarks of the area such as the road, river, school, church, existing fences, etc. Then label important points.
- 2. Mark proposed woodlot site: Mark the chosen site or multiple potential sites.
- 3. Plan the layout: Within that woodlot space, discuss how trees will be arranged and managed.
- 4. Use symbols: Encourage participants to place symbols on the map, e.g. a blue circle for the water tank, little green dots or triangles for trees to be planted, etc. If on the ground, they can use actual leaves to indicate tree planting spots, sticks for fence line, etc.
- 5. Presentation and consensus: If multiple groups made maps, have each present their map and ideas. They might have different site suggestions or layouts. Through discussion, merge the best ideas into one final community map.

Maintaining and Benefiting from the Woodlot

Once planted, a community woodlot needs ongoing care to thrive. Assign roles for who will water, who will monitor for pests, and who will coordinate pruning or thinning. The team could also form a woodlot committee or integrate it into an existing environmental committee. The regular barazas can then get updates on the woodlot's progress. During the session also discuss future benefits and usage rules upfront, e.g. the community might agree that for the first 5 years, no cutting, only pruning and deadwood collection. After 5 years, perhaps controlled harvesting can begin.





Module 4: Land Use Planning for Our Future

This session introduces the idea of land zoning and communal planning to protect forests, guide livestock, and allocate areas for farming, housing, and conservation.

Key Topics Covered:

- a) Understanding land zones: Where should grazing, wood collection, farming, and conservation happen?
- b) Drawing a community land map: Participants collaboratively draw their village and identify different land uses.
- c) Roleplay exercise: Simulate a planning meeting where different groups e.g., herders, women, forest rangers discuss how to use land fairly.

This module builds negotiation and visioning skills and can lay the foundation for village-level bylaws and participatory governance.

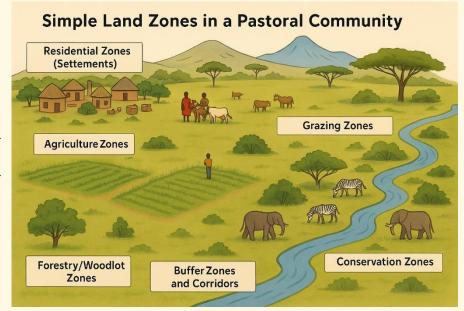
Simple Land Zones in a Pastoral Community

In Kuku Group Ranch, people and wildlife share a vast area for many purposes: grazing livestock, farming, settlements, and wildlife conservation areas. These uses can clash without some zoning, for example, farms expanding into grazing routes, or settlement in wildlife corridors. Zoning hence means setting aside certain areas for specific primary uses. Important zones to consider:

- ♣ Residential Zones (Settlements):
 - Areas where people live, like village centers and manyattas, plus space for schools, clinics, markets. In planning, the community might decide to contain settlements within a certain radius of a center or along certain corridors, instead of scattered everywhere. This also helps preserve open land beyond.

Grazing Zones:

 Traditionally, the Maasai had systems like *olopololi* which is a designated



grazing reserves for drought periods. Reviving such concepts is part of land use planning. We might designate wet-season grazing areas closer to settlements, and dry-season grazing zones that are reserved and only used when local pasture is depleted.

- Agriculture Zones:
 - Though most of Kuku is rangeland, some pockets are used for cultivation of crops like maize, beans, or vegetables. These should be clearly marked so they don't expand unchecked and wildlife corridors remain open.

- ♣ Forestry/Woodlot Zones:
 - o If community woodlots are part of the future, identify those areas on the land use map as well.
- Conservation Zones:
 - o These are critical areas set aside to protect wildlife and important ecosystems like wetlands, rivers, or forests. Protecting these zones ensures long-term viability of grazing and water.
- Buffer Zones and Corridors:
 - o These corridors should be kept open with no permanent farms or buildings. This prevents human-wildlife conflict if animals have a clear route and people know to be cautious or avoid blocking it.

Drawing a Community Land Map

Participatory Activity (approx. 45–60 minutes) – This is a broader mapping exercise where the community creates a land use map of their area, delineating the zones discussed. It's an empowering process where everyone literally sees their land and contributes to planning its use.

Materials: Large canvas or several flipchart papers joined, markers of different colors, and stickers or colored paper cutouts to mark features. If available, a georeferenced base map or satellite image of Kuku can be used. If not, a hand-drawn schematic map works.

Steps:

- 1) Outline Boundaries: Draw the outline of Kuku Group Ranch or the specific sub-area the community wants to plan for. Mark key reference points: neighboring group ranch boundaries, major roads, rivers, hills e.g., show where Amboseli park is on the west, or where the Chyulu hills lie to the east, to orient everyone.
- 2) Mark Current Land Uses: Ask participants to help mark where things are currently:
 - Settlements/villages: Use a house symbol or a cluster of dots.
 - Schools, trading centers, clinics: maybe a star or building symbol.
 - Fig. Known farming areas: draw little farm patch symbols in those locales.
 - Main grazing areas: lightly shade those.
 - Forested or conservation areas: outline any existing conservancies or forest patches.
 - Wildlife routes: draw arrows or animal footprints where elephants or wildlife commonly pass.
 - Water points: blue symbols for springs, pans, boreholes.



- 3) Discuss Challenges on the Map: As the current-use map forms, have people point out conflicts or problems. Mark these conflict spots with a special symbol such as an exclamation mark or a red dot.
- 4) Propose Zones on the Map: Use markers to sketch proposed zones:
 - Traw a boundary around areas to keep as pasture/grazing. Perhaps label them Grazing Zone A (wet season) and Grazing Zone B (dry reserve). Mark any olopololi areas decided.
 - © Circle or color in the settlement areas that exist and maybe any planned expansion.
 - Hatched lines or another color for farmland zones.

- For conservation zones, use green color to shade conservancy land, sacred groves, riparian buffer strips along rivers.
- Wildlife corridor: draw connecting arrows or an outlined pathway that will be kept open.
- Woodlots or future projects: If the was planned, mark it here too.
- 5) Final Map: Once discussion converges, have one or two people neatly highlight the final agreed zones. Label them clearly. This map could be photographed or later drawn more neatly for record-keeping. It represents the community's voiced plan.

Role-Play Exercise: Balancing Needs and Resolving Conflicts

Participatory Activity (approx. 30 minutes) – This is an interactive role-play to practice dealing with the kind of land use conflicts and decision-making that can happen. It's a fun yet enlightening way to get people to appreciate each other's perspectives and think about solutions in a collaborative manner.

Roles: Assign participants to different roles. You might have:

- a) A community elder chairing the meeting.
- b) A conservationist or ranger- concerned about wildlife.
- c) A pastoralist- concerned about grazing land for cattle.
- d) A youth entrepreneur- starting a business like a shop.
- e) A farmer- wants land to grow crops along the fertile road sides.
- f) A local government or chief's representative- thinking of official regulations and broader plan.
- g) A woman- representing household needs such as firewood, water etc.

The Role-Play: Set the scene as a community baraza or committee meeting. Let the elder or chair start the meeting and invite others to voice their position. Then just let the dialogue flow. Allow about 15-20 minutes of back-and-forth. Then, as moderator, guide them toward a resolution or at least a clearer understanding. After the role-play, step out of character and debrief with the whole group. Ask the role-players how they felt and ask the audience if the conversation sounded familiar or surprising. Often, real concerns emerge e.g., a real farmer might have been role-playing the farmer and expressed genuine frustrations.

Learning Points: Highlight that:

- a) Everyone has valid needs, but without planning and open discussion, conflict arises.
- b) By simulating, we saw the value of the land use plan as a reference.
- c) The exercise hopefully showed the importance of communication and seeking compromises that respect each zone's purpose.

Conclude the module by reinforcing that planning and open communication are tools the community can use to ensure a sustainable future for people, livestock, and wildlife in Kuku.

SECTION 4 COMMUNITY ACTIVITIES



Section 4: Community Activities

This section offers simple, hands-on activities designed to spark dialogue, reflection, and behavior change within households, youth groups, and community forums. Each activity encourages participants to connect personal experiences with broader themes of energy use, forest conservation, and sustainability.

These activities require no formal equipment just curiosity, conversation, and a willingness to observe and share. They are ideal for use during barazas, women's and youth group meetings, school clubs, and village events. The goal is to turn learning into action in ways that are fun, visual, and rooted in daily life.

Fuel Diary

Objective: Help families become aware of how much wood they use and how often they collect it.

How it works:

Each family (or group) keeps a record of how much firewood they use each day for 7 days. This includes:

- a) Number of logs/sticks used per meal
- b) Number of trips made to collect firewood
- c) Time spent per trip

Importance:

This exercise helps visualize the burden of firewood use. It provides a baseline to measure improvement once cleaner stoves or fuels are introduced. It also shows how energy use affects time, health, and forest pressure.

Energy Circle

Objective: Create a safe space for community storytelling and shared energy experiences.

How it works:

Participants especially women and youth sit in a circle and share personal experiences with cooking fuel, energy access, or changes they've seen over time. The prompts could include:

- 1) What was your worst experience while collecting firewood?
- 2) How many hours do you spend collecting firewood each week?
- 3) What do you wish was different about how you cook or light your home?

Importance:

When people share their stories, others learn they are not alone and that better solutions exist. The Energy Circle builds empathy, awareness, and momentum for change.

Dream Map

Objective: Inspire young people to visualize a greener, healthier future for Kuku.

How it works:

Children or youth are given paper and colored pencils to draw their dream Kuku in 2030. They can include:

- a) Forests and trees
- b) Animals
- c) Solar panels
- d) Schools and clean homes
- e) Happy families

Facilitators can display these drawings at community events or school assemblies.

Importance:

This activity builds emotional connection to the land and plants seeds of environmental stewardship in the next generation.

Stove Challenge

Objective: Demonstrate how improved stoves save fuel and time.

How it works:

Three different cooking setups are used to cook the same meal (e.g., ugali):

- 1. Traditional three-stone fire
- 2. Improved cookstove
- 3. Briquette stove or biogas (if available)

Record:

- a) Amount of fuel used
- b) Time taken
- c) Smoke levels
- d) Taste/texture feedback from tasters

Importance:

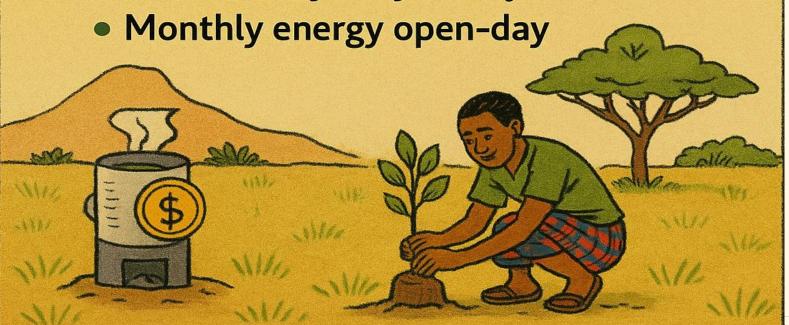
The challenge makes the case for cleaner stoves visually and practically. It shows real benefits such as faster cooking, less smoke, and reduced wood use and encourages people to adopt what they see works.

SECTION 5 WOMEN AND YOUTH GROUP TOOLS

Savings Log: Track time and money saved

ENERGY AMBASSADOR

- Energy Ambassador Cards: Recognize leaders
- Project Ideas:
 - Fuel-efficient stoves for mothers
 - Tree nursery for youth jobs



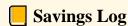




Section 5: Women and Youth Group Tools

Women and youth are at the heart of community change in Kuku. This section provides practical tools and ideas tailored specifically for women's groups, youth networks, school clubs, and village innovators who want to lead clean energy and conservation projects.

These tools help groups track progress, celebrate leadership, and organize impactful local initiatives. They are designed to be simple, visual, and easily shared during meetings or workshops.



Purpose: Help groups track the real benefits of adopting clean energy.

How it works:

Each group keeps a simple log showing how much time and money is saved when:

- Using improved stoves or briquettes
- b) Charging phones with solar instead of walking to a center
- c) Reducing hospital visits due to less smoke exposure

A sample weekly table might include:

What Changed?	Time Saved (hrs)	Money Saved (KES)
Switched to briquettes	4	300
Solar for phone charging	2	100

Importance:

Helps group members see that clean energy pays off, in both time and income.

Energy Ambassador Cards

Purpose: Recognize and motivate local champions of clean energy.

How it works:

Print small, colorful cards or certificates with names of individuals who:

- ♣ Inspire others to adopt clean energy
- **♣** Start or maintain a tree nursery
- ♣ Run demos or help others repair solar panels or stoves

These can be awarded monthly during group meetings or community events.

Importance:

Positive recognition builds momentum. It gives local heroes a platform and shows that their efforts are valued.

Project Ideas for Women and Youth Groups

These ideas can be started with small funds, group savings, or support from NGOs and partners. Each promotes local leadership while improving livelihoods and protecting the environment.

1. **Head Proof of Mothers**

Buy or make improved stoves in bulk and distribute them through women's savings groups. Organize cooking demos and track fuel savings.

2. Tree Nursery for Youth Jobs

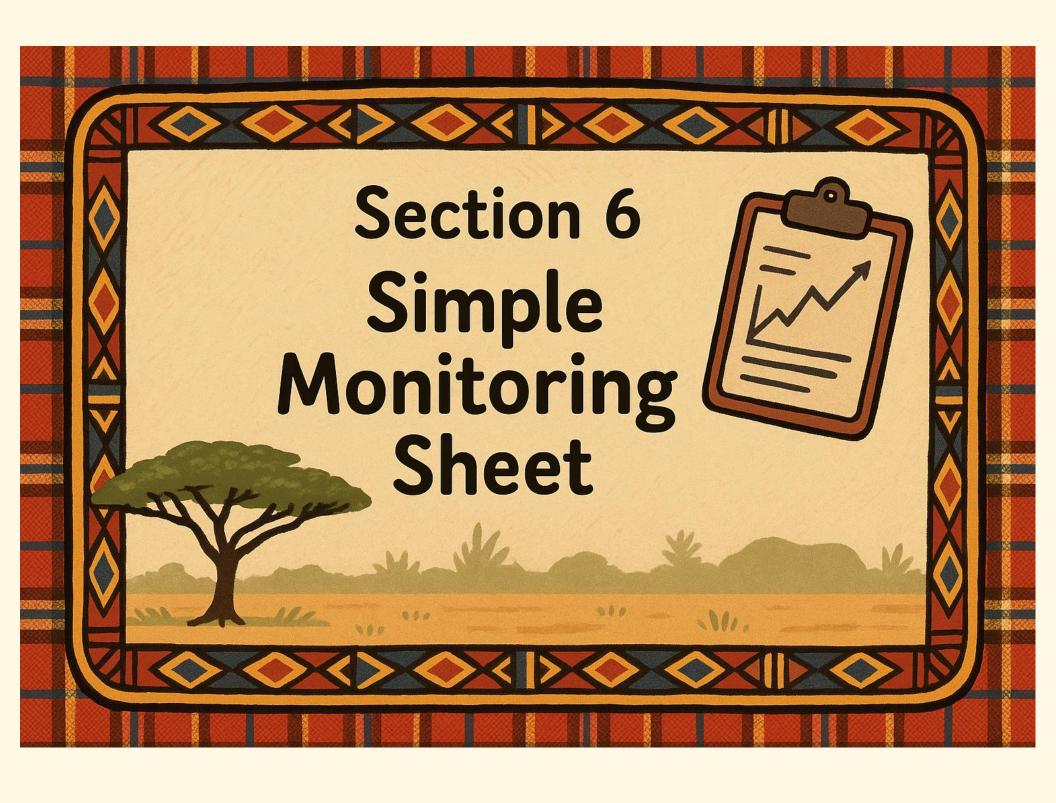
Start a small nursery with fast-growing native trees. Sell seedlings to schools, institutions, and households. Youth members learn skills while earning income and helping reforest their home.

3. Monthly Energy Open-Day

Host a community event each month where groups showcase clean stoves, solar lights, woodlot updates, or creative skits about energy. Invite neighbors, leaders, and local guests.

Importance:

Projects bring the toolkit to life. They build pride, visibility, and real outcomes both economic and environmental.



Section 6: Simple Monitoring Sheet

Monitoring doesn't have to be complicated. In Kuku, local groups and leaders can use this simple tracking system to measure progress in clean energy adoption and forest restoration.

This section introduces four key indicators, each tied to a community action like using clean cookstoves, planting trees, or switching to solar. The goal is to make change visible and measurable, even without complex technology.

Each activity has:

- a) An indicator (what to monitor),
- b) A tracking method (how to observe or record it),
- c) A responsible group (who tracks it).

Monitoring Table

Indicator	How to Track	Who Tracks It
Clean cookstoves in	Count how many households have improved cookstoves in	Youth representatives
use	each zone	
Trees planted	Keep a logbook of seedlings planted and take photos after 1 month	Women's group
Solar systems installed	Count lanterns or solar kits in use per household	Community facilitators
Reduced wood trips	Ask women during meetings how many times they collect	Village elders + group
	firewood per week	reps

▲ Tips for Success

- ♣ Use notebooks, drawings, or even chalkboards to track progress whatever is available.
- ♣ Involve youth and women as monitors. They are often closest to the action.
- **♣** Share updates during monthly barazas or group meetings.
- ♣ Celebrate milestones such as 10 stoves this month or 100 trees planted.

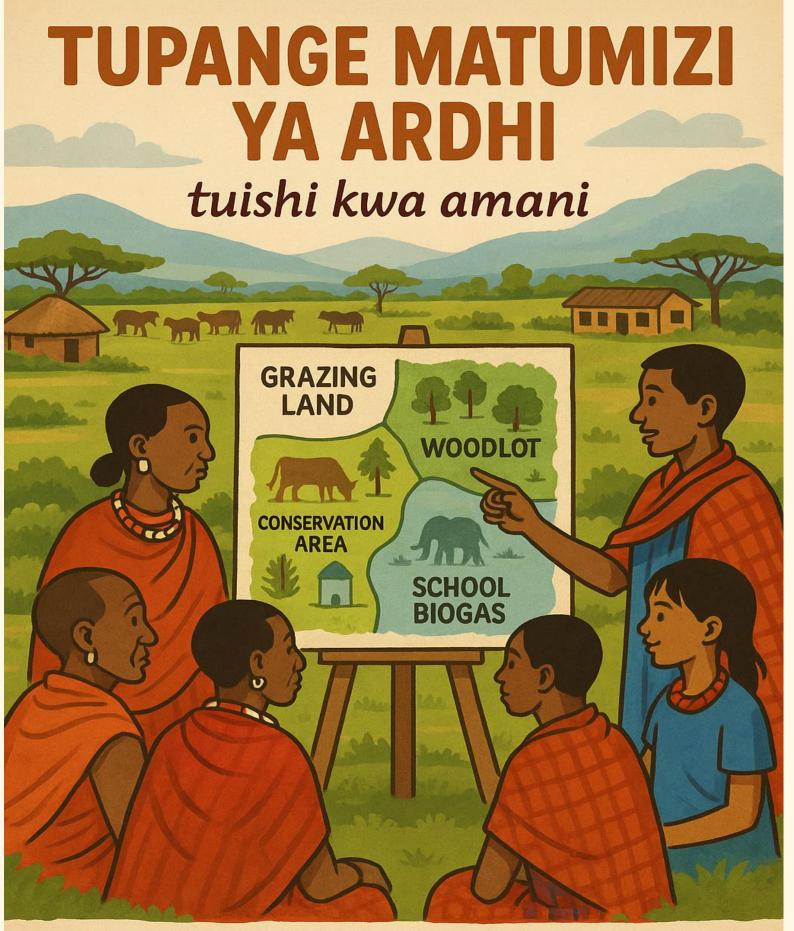
SECTION 7 TAKE-HOME POSTERS



TUMIA NISHATI SAFI, LINDA AFYA YA FAMILIA YAKO



ENKATITIN NAATA ENKOPITO, PEÉ IYIE ENKATITIN AIROWUO



Ikinya enkutoto naibor, pee iyie iltunganak lenyena.

INTEGRATING CLEAN ENERGY AND CONSERVATION

Ewangan naata orpul oo nkera

STRATEGIES FOR KUKU GROUP-RANCH



SOLAR MINI-GRIDS



Provide offgrid power for communities



REFORESTATION

Restore tree cover and wildlife habitat



COMMUNAL LAND-USE BYLAWS

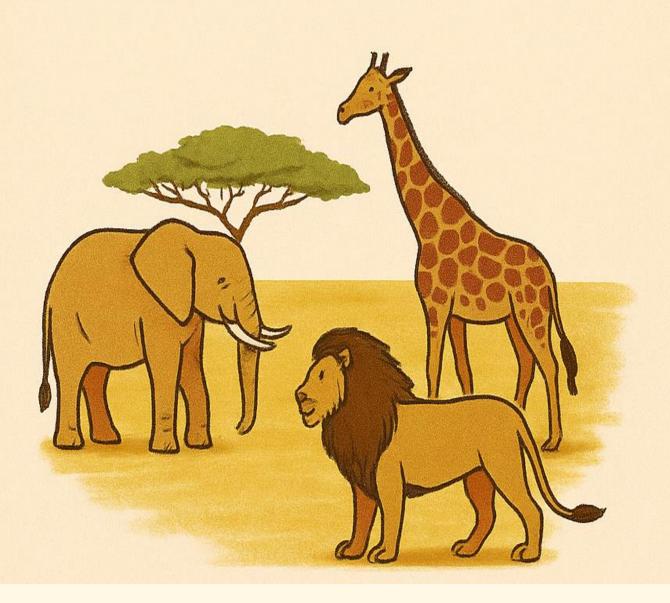


Protect forests and wildiife corridors

Tuchunge ardhi yetu na mazingira yetu

THE JOURNEY CONTINUES

Working together, we can make our community healthier and greener for generations to come. Let's keep moving towards clean energy and protecting the forests of Kuku Group Ranch.





THANK YOU & KEEP GOING



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