

Climate-U

Transforming Universities
for a Changing Climate

**The Role of Indigenous
Knowledge in Natural
Resource Conservation
and Management:
The Case of Njuri Ncheke,
Council of Elders - Meru,
Kenya**

Transforming Universities for a
Changing Climate

Working Paper Series No. 11

By John M. Muchiri, Mworira
Mugambi and Patrick Gitonga

April 2023



**UK Research
and Innovation**



Climate-U

Transforming Universities
for a Changing Climate

The Role of Indigenous Knowledge in Natural Resource Conservation and Management: The Case of Njuri Ncheke, Council of Elders - Meru, Kenya

**Transforming Universities for a Changing Climate
Working Paper No. 11**

**John M. Muchiri
Mworia Mugambi
Patrick Gitonga
April 2023**

Contact: John Muchiri
Email: john.muchiri@kemu.ac.ke
Web: www.climate-uni.com
Twitter: @ClimateUniv

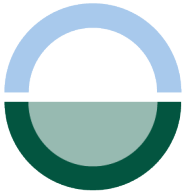
Free to download with use of suggested citation:
John M. Muchiri, Mworia Mugambi, and Patrick Gitonga (2023) *The Role of Indigenous Knowledge in Natural Resource Conservation and Management: The Case of Njuri Ncheke, Council of Elders - Meru, Kenya*. Transforming Universities for a Changing Climate, Working Paper Series No. 11

© April 2023 Climate-U,
Institute of Education, UCL
20 Bedford Way, London, WC1H 0AL
ISSN: 2754-0308

Abstract

Given the importance of natural resource management in climate action, Kenya Methodist University (KeMU) sought to engage with the respected community leaders, known as the Njuri Ncheke, to understand this organization's contribution to conserving and managing resources among the Meru community. The study was conceived and developed during deliberations by the KeMU participatory action research group (PARG), in Meru, which included stakeholders from the County government, community representatives, the national environmental management agency, university students, and staff. The PARG conceived the need to document some of the indigenous practices in the Meru community that contributed to the sustainable use of natural resources. The study adopted a qualitative study design using semi-structured interviews with members of the Njuri Ncheke selected through snowball sampling. Twelve interviews were conducted, recorded in either Kimeru, English, or Kiswahili, depending on the level of understanding and the interviewee's age. Data and information were also collected through photography, videography, field notes, and direct site visitations. The results confirmed that Njuri Ncheke directly managed existing natural resources, controlling the community's use of land, forests, water and other natural resources, reducing overuse, environmental degradation and community conflicts. We conclude that indigenous knowledge plays a significant role in conservation matters and should be considered in a discussion about climate justice and climate change.





Authors

John Munderu Muchiri, PhD. (Affiliate researcher, Climate U)

Dr. John Munderu Muchiri is Senior Lecturer in Biomedical Sciences and Director, Postgraduate Studies at Kenya Methodist University, a published researcher and educationist in Agricultural Sciences, Biochemistry and Molecular Biology, Virology, Microbiology and Immunology. Dr. Muchiri is an affiliate researcher in the project Transforming universities for a changing climate, leading the Kenya Methodist University team. His focus is in an education that offers solutions and answers to the most basic most our daily needs like provision of clean water, alternative sources of fuel and energy, better health care, education etc. This requires good planning, adequate capacity- both financial and human so that these society needs are met in a sustainable manner.

Website www.kemu.ac.ke; Email: john.muchiri@kemu.ac.ke

Patrick Njeru Gitonga (Affiliate researcher, Climate U)

Mr. Gitonga is the Deputy Registrar, Academic Affairs, Kenya Methodist University. He holds a Master of Philosophy degree in Zoology (Applied Ecology) from Moi University. His keen interest is research and capacity building on environmental and management factors towards sustainable environments. Currently he is researching on the Interaction of Earthworms and Soil Microorganisms for the Control of Soil-Borne Plant Diseases in Agriculture System. He coordinates the RCE Mount Kenya East Regional Centre of Expertise (RCE) and spearheading the sustainable development activities in the region. Email: patrick.njeru@kemu.ac.ke

Mworia Mugambi (Affiliate researcher, Climate U)

Dr. Mugambi is a Senior Lecturer in Agriculture and Rural Development at Kenya Methodist University. He has a background in Range management and expertise in resource conservation and management. Dr. Mugambi is directly engaged in community mobilisation and rural development and currently chairs Meru County Water Management Board. His research interests are agricultural practices, natural resource conservation and rural development. Email: Mworia.mugambi@kemu.ac.ke

Introduction

Indigenous knowledge has been recognized as a valuable tool in conserving and managing natural resources, especially in areas where traditional practices have been passed down from generation to generation. Njuri Ncheke, a traditional council of elders in Meru County, Kenya, is one such institution that has played a vital role in conserving natural resources through its use of indigenous knowledge.

Meru people are a Bantu ethnic group that inhabits the North and Eastern slopes of Mount Kenya. The name “Meru” refers to both the people and the region, which comprises nine regions, namely the Igoji, Imenti, Tigania, Mitine Igembe, Mwimbi, Muthambi, Chuka and Tharaka. The sub-tribes represented in this area share common dialects and are collectively called Meru. The Meru community in Kenya occupies two counties, Meru County and Tharaka Nithi County. The Ameru community has long been governed by elected and hierarchical councils of elders from the clan level right up to the supreme Njuri Ncheke council. The council has a long and rich history dating back to pre-colonial times, and its origins can be traced to the Meru people’s migration from Ethiopia to Kenya. According to Githieya and Kobia (2018), “Njuri Ncheke was established in the early 17th century as a social and political institution that was responsible for maintaining peace, resolving disputes, and promoting social cohesion among the Meru people” (p. 101).

The Njuri-Ncheke is the highest social rank a Meru man can aspire to. The elders forming the Njuri-Ncheke are carefully selected and comprise mature, composed, respected community members who are considered beyond reproach in their conduct of family life. The Njuri Ncheke council represents the apex of the Ameru traditional judicial system, and the entire community respects their mandates. They are primarily entrusted with making and executing common laws within the community.

A lesser-known yet important function of the Njuri-Ncheke is overseeing and enforcing the rules and regulations controlling the use and conservation of open grasslands, salt-licks, and forests. Their work as conservators extends to the preservation of Sacred Sites. This study focused on the Njuri Ncheke council of elders’ critical role in conserving and managing natural resources in the Meru community. The community entrusted Njuri Ncheke with making laws and regulations that would ensure resources were preserved, culture was respected, and traditional practices were held with respect when it touched on community land, existing forests, and water sources, among others, thus invaluablely contributing to sustainability for the betterment of the community resources and their use.

This case study was conceptualized following the engagements in the participatory action research group (PARG) at Kenya Methodist University during the initial discussions on how best to implement the project ‘Transforming Universities for a Changing Climate.’ The PARG comprised representative members of the Kenya Methodist University community – students and

staff, non-government organizations, community organizations, representatives from Meru County, Tharaka Nithi County, and national government, and the National Environmental Management Authority (NEMA). The discussions were held in an open forum where members were free to air their views on climate change, environmental conservation, resource utilization and sustainability. The participants shared the past and current practices that could be adopted, enhanced, or reprogrammed as interventions and mitigations for climate change action. Among them was the role of the university as an education and research institution, current and past community engagements in natural resource conservation and management, and possible areas of mitigation and interventions to advance climate change issues. PARG members considered that although Kenya Methodist University has established itself in Meru as an educational institution, its participation with the community on matters of climate action was limited. The PARG agreed to engage in curriculum review to accommodate the teaching on climate change to university students because of its significant impact on the students who went through this curriculum. The PARG considered community engagement equally important, which generated the current study on Njuri Ncheke in resource conservation and management. The University could also bridge the gap between research and practice by bringing the community, county government, and other non-governmental organizations towards establishing links to further the agenda for climate justice and action through organized platforms for engagements. This qualitative case study offered a beginning of such arrangements by enlisting an existing community organization, the Njuri Ncheke, Meru council of elders, in seeking to understand their role as community leaders and their contribution to cultural and natural resources for community advancement. A number of studies seeking to understand the operations of the Njuri Ncheke are highlighted under the literature review section. However, the current study specifically sought to understand some of the indigenous practices in the Meru community that contributed to the sustainable use of natural resources, which was applied for mitigation or adaptation to the changing climate.

In Meru, this knowledge is best embodied and preserved through an organized council of elders known as Njuri Ncheke. Historically, selecting an elder of Njuri Ncheke was methodical and deliberate. The Meru community had an elaborate, hierarchical lineage and stages of passage for both girls and boys, from birth to maturity. The young people were grouped according to their age sets, an arrangement used to identify the time and period when one was born. These groups were accountable to their seniors and supervised by elders in the community. Through this structure, leaders were identified from each age set, enabling the identification of persons with exemplary leadership traits compared to their peers. From this process, those identified were admitted into Njuri Ncheke, Meru council of elders. Today, becoming a member of the Njuri Ncheke has additional considerations, including the level of education and respect by society, allowing the accommodation of younger knowledgeable individuals. In response to a question about whether the term Njuri and Njuri Ncheke means the same, one of the interviewees had the following to say:

I do not think there is much difference between Njuri and Njuri Ncheke; although the original Njuri were mostly elderly people, of late, we got young people too who have joined Njuri Ncheke because they have seen its importance, and we also want to mentor them... Of course, we take people from eighteen years and above who are mature, married, and with family.

-Interviewee 5.

In this case study, we aimed to demonstrate that a people's culture influences how resources are preserved and used sustainably. The community managed resources such as forests, land, and water to ensure they benefited all and remained accessible to all. The Njuri Ncheke council of elders was respected as the custodian of this cultural heritage and leadership responsibility. Most importantly, the study sought to establish how the university can engage the community and provide a platform for preserving indigenous knowledge and culture to sustain resource utilization and advance climate change mitigation and adaptation. The outcome of this study will benefit the community by enhancing the existing community outreach programmes in the university's community engagement plan. This plan includes sharing the experience and lessons learnt from this documentation of part of the local indigenous knowledge on natural resource conservation and management. The study publication will serve as reference material for current and future student populations in the university in essential areas such as agroforestry, traditional medicine, and biodiversity conservation, among others, both at the local and national levels and for comparisons with other related indigenous knowledge studies. Kenya comprises over 40 indigenous communities with diverse cultural and resource conservation practices. Kenya Methodist University has an opportunity to play a role through research and community engagement because of its respected position as a private university that has contributed to significant changes in the education and economics of Meru. The university would provide leadership through partnerships and community engagements that created opportunities to advance the issues of climate justice and climate action. Therefore, understanding the patterns among the Meru-Njuri Ncheke council of elders provides a platform to advance research on the role and influence of indigenous knowledge on climate change and climate justice-related issues, leading to a national and even international dialogue. This qualitative study was therefore conceived as part of the main objective of answering how higher education institutions, particularly universities, can engage better with the community on climate change and conservation to enhance sustainability. The study of the Njuri Ncheke council of elders by Kenya Methodist University researchers was to answer the questions:

1. What is the role of the community leadership organization, the Njuri Ncheke council of elders, on community mobilization for and sustainable use of resources?
2. How have the Meru traditions and practices (indigenous knowledge) guided resource conservation and utilization?



3. What is the existing evidence that KeMU has participated in engaging the community on issues concerning environmental conservation and climate change issues?

4. How could universities, particularly KeMU, contribute to preserving indigenous knowledge in the community to advance the course of environmental conservation and climate change issues?

LITERATURE ON THE NJURI NCHEKE

This literature review examines the role of indigenous knowledge in natural resource conservation, explicitly focusing on the case of Njuri Ncheke. Njuri Ncheke, the traditional council of elders of the Meru people in Kenya, has substantially promoted environmental conservation in the region. Several studies have highlighted the council's contributions to promoting sustainable land management, protecting natural resources, preserving traditional ecological knowledge, community-based conservation initiatives, policy advocacy, and conflict resolution.

For instance, Mburugu and Gitonga (2019) observed that Njuri Ncheke has been instrumental in developing and implementing land use plans that promote sustainable land management practices. The council has also used traditional ecological knowledge to identify and preserve critical environmental resources such as medicinal plants, trees, and water sources. Furthermore, Njuri Ncheke has supported community conservation initiatives, such as establishing community-based conservation areas, tree planting, and sustainable agriculture practices.

According to Kariuki and Mureithi (2015), "Njuri Ncheke has been at the forefront of promoting sustainable land use practices, including conservation farming, agroforestry, and the protection of natural resources such as forests, rivers, and grazing lands" (p. 88). The council has developed and implemented land use plans that promote sustainable land management practices. Njuri Ncheke has also advocated protecting forests, rivers, and other natural resources from unsustainable exploitation (Kariuki & Mureithi, 2015).

According to Muthamia (2021), the traditional knowledge system of the Meru community, as embodied by the Njuri Ncheke, has been crucial in the sustainable development and management of natural resources. The author argues that the Njuri Ncheke has effectively maintained a delicate balance between using natural resources and their conservation. Muthamia further explains that the traditional knowledge system of the Njuri Ncheke has been passed down from generation to generation and has been used to govern the use of natural resources. The system has enabled the Meru community to sustainably manage its natural resources, including water sources, forests, and land.

Njue and Njeru (2020) also note that the Njuri Ncheke has played a critical role in conserving the environment in Meru. According to

the authors, the Njuri Ncheke have been involved in preserving the Mount Kenya ecosystem through their traditional practices. These practices include the conservation of sacred sites, the protection of forests, and the regulation of hunting and gathering activities. The authors argue that Njuri Ncheke's traditional knowledge system has helped to maintain the ecosystem's integrity and promote the sustainable use of natural resources.

In addition to promoting sustainable land use practices, Njuri Ncheke has also played a significant role in preserving traditional ecological knowledge. The council has used traditional knowledge to identify and conserve critical environmental resources such as medicinal plants and trees and to manage grazing lands and water resources. Njuri Ncheke has also promoted sustainable agriculture practices based on traditional ecological knowledge (Mburugu & Gitonga, 2019).

Additionally, Kiura and Wamicha (2018) point out that the Njuri Ncheke has been instrumental in conserving water sources in Meru. The authors note that the Njuri Ncheke has been involved in preserving the community's wetlands and critical water sources. The traditional council has enforced regulations that limit activities that could lead to the degradation of wetlands. The authors further explain that the Njuri Ncheke have also used their traditional knowledge to promote water conservation techniques such as rainwater harvesting.

Overall, the literature suggests that Njuri Ncheke has been crucial in promoting environmental conservation in the Meru region. The council's contributions have ranged from preserving traditional ecological knowledge to promoting sustainable land management practices and policy advocacy. These efforts have helped to preserve biodiversity, maintain ecosystem services, and enhance the resilience of local communities to environmental changes. However, a closer understanding is needed of how the leadership practices of the council serve to facilitate the deployment of indigenous knowledge in these processes, as well as the role that universities can play as partners. This study aims to contribute to understanding of these questions.

RESEARCH DESIGN AND METHODS

The study adopted a qualitative design using semi-structured interviews with members of the Njuri Ncheke council of elders selected through snowball sampling. During the discussion, the PARG in KeMU suggested that indigenous knowledge and practices played a significant role in how the Meru could conserve and utilize resources sustainably. This study was set up to interrogate these premises and advance the research aims of transforming universities for a changing climate ©.

Representative members of Njuri Ncheke were identified and contacted for interviews. The interviews were conducted using a semi-structured questionnaire guide, with an open mind for any additional information that may emerge during the discussion

about the subject of study. The Njuri Ncheke was chosen because the Meru has retained this structure that cuts across age, religion, and educational background differences. It is a respected organ among the Ameru community and serves as a people's voice whenever there is a need to hold discussions with other communities in the country.

Like many African societies, the Ameru leadership was male-dominated, with Njuri Ncheke's elders being men. Initially, these were older men who were known and respected characters in society. However, in this study, we interviewed Njuri Ncheke elders between the ages of 40 to 80 years. Therefore the Njuri Ncheke organizational structure is slowly changing to accommodate men of the younger generation, who are better educated and can bring more wisdom in decision-making. A total of 12 interviews were conducted using the snowball sampling method to ensure diversity and randomization. The interviews were recorded after obtaining consent. Individuals were contacted, and the interview time and place were agreed on.

The language of conversation was either Kimeru, English, or Kiswahili, based on the age and language comprehension of the interviewee. The discussion followed a guide but with an allowance to accept an additional contribution from interviewees related to resource conservation, utilization, and management. In allowing the participants to express other views associated with the operational or organizational arrangement in the society, the study aimed to gain insights into how best the community could further engage in conservation practices in today's realities. In some instances, the interview involved more than one interviewee, which provided some form of validation of information shared or offered collaboration. This study was conducted during the campaign period toward a general election, and due to Njuri Ncheke's pseudo-political connection and being members of the society, we experienced some disruptions. However, once identified and an interview time set, the interview was conducted without interference. The interview recordings were downloaded to Sound organizer version 2.0 software. The interviews were transcribed verbatim in the original language before translation to English for analysis. The English version formed the basis for contextual and thematic analysis of the Njuri Ncheke, Meru council of elders' engagement in cultural and natural conservation and management among the Ameru community. In addition to the recorded interviews, we employed photography, videography, field notes, and observations to collect data and relevant information on sites and places of operation related to this study.

The data collected was summarized in a tabular form, as in table 1, showing the source, key areas of conversation, and relevant thematic outputs. This was used to derive thematic discussion areas, such as Njuri Ncheke as community land trustees, enforcers of conservation measures within the community, conflict resolution organs, and custodians of culture, among other practices. Each of these is discussed below with related supporting evidence from the interviews.

NJURI NCHEKE, THE AMERU COMMUNITY LAND TRUSTEES

As we conducted the interviews, it came out that in the past, the Ameru generally did not subdivide land for individual possession or ownership. Instead, the land was communally held under the administration of the Njuri Ncheke as the trustees. Traditionally, Njuri Ncheke was entrusted with ensuring the land benefited all equally, ensuring everyone accrued some benefit and, by so doing, creating a sense of belonging. This communal ownership of land was significant in more than one way. First, the Njuri Ncheke would be able to regulate the usage of lands and related natural resources such as forests and rivers, thus avoiding overuse or possible conflicts. Accepted traditional norms or community laws governing land allocation and use existed. If anyone violated these laws, s/he could be fined to pay by giving up a specified number of animals, proportional to the extent of the violation. If the damage was extensive such that an individual could not afford to raise the fines, the clan was charged to pay for it in the form of animals or, in other cases, the individual was expelled from the community for a specified number of years until restitution was sought.

For example, interviewee 2 indicated that it was easier to conserve the environment in the past since land did not belong to individuals, unlike today when the land was apportioned and title deeds issued. He further noted that on several occasions, the Njuri Ncheke refused to sell the land for demarcation and other developments.

Our forests were suggested to be subdivided for people and all trees cut down, but Njuri Ncheke went against that proposal, arguing that Meru people do not tamper with trees and when they are destroyed that would result in the catastrophe which is a curse.

-Interviewee 2.

An example of an adverse effect is when interviewee 2 mentioned that during the colonial period, a local chief committed suicide when he was forced to sign documents to cede land for the construction of schools in the current Kaaga area, where KeMU and other institutions are established. This demonstrates how closely guarded the land issue was, and the fear of being reprimanded for going against community-established norms and regulations strictly enforced by the Njuri Ncheke was taken.

He was a senior chief of the area at that time, and District Commissioner was forcing him to sign, which was contrary to the oath, but he refused to sign. He was told he must sign that morning in 1952 so the government could build a school. That morning he took a shot gun, went to his farm and shot himself, and died.

-Interviewee 2.

This collective ownership of land helped the Ameru people under the leadership of Njuri Ncheke to freely migrate across their region;



thus, no single region or area was overexploited through farming or grazing of animals. Each community member had a duty to protect the interests and property belonging to the community, even controversially when it meant driving away “strangers” who came to their land.

Like in 1952, Njuri Ncheke authorized all Kikuyu to be chased out of Meru, especially at a hill known as Kirima Kia Gikuu and Kibirichia. All houses were torched down, Kikuyus were chased out, leaving the land to the Ameru people.

-Interviewee 2.

One of the reasons Njuri Ncheke was joined by mature, married, respected, and reasonable elders who exhibited outstanding leadership in the community was because they believed that certain decisions made to protect a territory must remain a secret. It was necessary to reduce the possibility of information leakage. Hence members took an oath of secrecy to live by and uphold ethical values and respect the community norms.

NJURI NCHEKE, ENFORCER OF NATURAL RESOURCE CONSERVATION MEASURES

The Njuri Ncheke council of elders has served as the community pseudo-judicial organization that passes and enforces the laws to protect and increase forest flora and fauna by monitoring activities such as poaching and prohibiting the cutting down of trees. The existence of legal legislation has reduced this role. However, the Njuri Ncheke still meets to deliberate and decide on numerous community land use and resources issues. According to interviewee 3, the Njuri Ncheke elders could inculcate some mythical fear in the community, which helped enforce rules. One such myth was that if one goes to the forest to get firewood, one may encounter a mythical animal or spirits known as ‘Kirimarimu’ that could swallow them.

...one thing they had conserved these forests. Remember that time; they would bring some fear to the community. If you go to this forest to get firewood, you may meet spirits known as ‘Kirimarimu.’ So they create that fear. Unless they find out that there is enough firewood in that forest and it has dried, and there are pieces that could be used, then the elderly leaders could take you to collect.

-Interviewee 3.

According to interviewee 4, if one went to the forest unauthorized, Njuri Ncheke would impose a penalty that would be paid through the contribution of the entire clan where the individual(s) belonged. Hence, the entire clan had a duty to ensure that no one violated the rules and regulations because one individual violation cost the entire clan. The question is whether this meant no one ever went into the forest. The answer is no; people still ventured into the forests and used the resources. The interviewee clarified that

what happened is at specific times of the year, mainly from August to September, the community was allowed to go and collect firewood from the forest, with the firewood strictly fetched from the branches. According to interviewee 9, no one was allowed into the forest with tools such as swords or machetes to avoid any possibility of cutting down live trees.

It was the work of Njuri Ncheke and, to an extent, all men to take care of the forests. That was their responsibility; everybody in the community understood and respected this as their work. They made sure that people did not go to the forest to make any destruction like cutting trees. One way of ensuring it was protected was to create fear in the people. To say that evil forest spirits that live there and you cannot go there.

-Interviewee 5.

Another important aspect was the protection of rivers and water resources. It was crucial because communities living upstream could block or divert rivers leading to less water flow downstream. Another way that affected rivers was by farming on riparian land, thus narrowing the river paths. Interviewee 4 asserts that it was illegal to farm on riparian land: “Rivers were swampy, but nowadays, we have farmed where there were such swamps and cleared them all”. This was similarly emphasised by Interviewee 3, who said that farming along river banks was prohibited.

No farming around the river, that was very clear. They were preventing soil erosion. And I remember even on the farm where they were cultivating soil was not just left without being taken care of.

-Interviewee 3.

To further affirm this position, the interviewees revealed that only specific indigenous trees could be planted near the river banks, such as the fig trees, which protect rivers from drying up and maintain the banks. These trees were sacred, and Njuri Ncheke ensured they were not destroyed.

There are big trees that we used to have, even in recent years, called Mikumbu, which were grown along the river and spread out wide. People were warned not to cut, and if you did, you would be asked for a cow as a penalty.

-Interviewee 8.

The need to conserve and protect trees planted by the water banks was clearly one of the concerns of the Njuri Ncheke and, by extension, the community. It was seen as one way to ensure rivers did not dry up.

Those trees that were along rivers were not allowed to be cut. This is because people knew that those down the same stream would not get water when the water dries up due to the sun's heat. You were prohibited from diverting water to your land because other people will not have water.

-Interviewee 10.

The Njuri Ncheke elders blamed the introduction of free leaseholds and individual ownership of land for allowing people to plant other exotic tree species in the area that the colonial government introduced. These exotic trees take a shorter time to mature, three years or less, but have had the negative effect of draining the rivers.

There is a huge difference between now and previous years. There are tree species that the government introduced from; it was from South Africa. They were planted along rivers, taking around three years to grow. They have drained the water. When they cut trees, the government makes money.

-Interviewee 8.

As shown in the video recorded in the community:

The indigenous riverine vegetation has been replaced with fast-growing exotic tree species, especially the eucalyptus – the 'thirsty' trees threatening to 'drink' the swamps and streams dry. In most parts, sugarcane and arrow roots have replaced the swamp's vegetation.

(Source: Video recorded on Friday, 14th October 2022¹)

Government administrators now protect the forests; Interviewee 5 notes that some government officers are corrupt and bribed to allow trees to be cut down:

Some of the administrations are corrupt. Sorry to say that. There is that corruption part of it, so they allow them to be cut.

-Interviewee 8.

To solve this problem, the interviewee proposed that a joint effort between the Njuri Ncheke and local government administrators could enforce the rules to help restore the original conservation and protection measures. In his view, KeMU could offer some help by bringing together the Church as an organization, the Njuri Ncheke, and the government agencies to deliberate how they could forge partnerships to help conserve existing natural resources for the community's good. This applies because KeMU is a faith-based education institution that enjoys the community's trust. The university, as an education and research institution, has an advantage because education is acknowledged as a "light" in the community. This bringing together of the organizations is very similar to the participatory action research model that was the genesis of the current qualitative case study.

You were not allowed to go to the forest and cut those old trees because the Meru people considered them very important. But from when the land was given to individuals, trees were all cut. Do you see trees anywhere unless the ones that the Njuri Ncheke protects? Nowhere else. If we get strict administration, they can take care. They can talk to the people and encourage them not to do it after getting a good lesson. So, if we get good lessons, Njuri Ncheke and the administration can team up to help each other to see if they try to rescue what has gone wrong.

-Interviewee 10.

The sentiments on the need for collaboration between various players were emphasized to address current scenarios where different stakeholders were all working towards the same goal but working separately. The university, as an education and research institution, could play a coordinating role among the stakeholders through its community extension arm or during research engagement forums.

The University, especially the Church-linked one such as KeMU, can play the role of causing the conversation with various stakeholders' forums, which the University can facilitate to create an opportunity for the exchange of ideas and the preservation of indigenous knowledge emanating from these conversations. This rich heritage of preserving forests and rivers remains relevant because the forest cover continues to diminish, and rivers run dry, creating droughts and resource conflicts between communities.

-Interviewee 5.

Therefore the university can play a more proactive role in bringing together different stakeholders to help educate and create a team to respond to climate change issues, resource protection and management.

LAND DEMARCATION AND INDIVIDUAL OWNERSHIP HAVE CONTRIBUTED TO THE OVERUTILIZATION OF RESOURCES

As expressed by the interviewees, the custodial land ownership by the Njuri Ncheke was instrumental in safeguarding community natural resources. Like in many other parts of the country, the British colonial government's compulsory land acquisition, which took place in the 1950s, alienated the community system of handling land issues. From henceforward, land adjudication has been administered through a centralized government system. Land demarcation, subdivision, and ownership have since changed, allowing individual ownership. The assumed custodian of community land by the Njuri Ncheke or continued enforcement of conservation measures is no longer applicable. Land ownership or change of use can happen without regard to the Njuri Ncheke

¹ <https://www.youtube.com/watch?v=i4WqPh37Fao>



council of elders. The interviewees especially emphasized this as they explained the effect of this move on conserving natural resources.

According to interviewee 1, people started cutting down trees and farming on riparian land, destroying the environment because no one could do anything to stop it. They considered themselves the sole decision-makers for utilizing forest resources within their farms.

We cannot do anything because everyone has their titles which protect them. If I take you to the lower side of my land, you will notice I am the only one who does not allow trees to be cut. The rest of the places are wilderness from this side to the other. Even if you cut a tree down there, they come and steal at night. You cannot even find firewood. When X bought that land from Y, he cultivated it up to the edge of the river, which was bare land. I am the only person who has trees within the river because when I stopped farming, I said no tree that should be cut there.

-Interviewee 1.

While discussions about land remain emotive among the community, who consider that the coming of the colonial government brought about disruptions and eventual loss of their land, members of the community also agree that subsequent governments have done little to conserve this critical means of production. Land demarcation and the introduction of individual titles have complicated community conservation measures or enforcements of community regulations where they exist. The implication has been a loss of important resources such as forests and rivers. In other cases, it has resulted in inter-community conflicts as people search for better land for farming or grazing spaces and water for their animals.

THE ROLE OF NJURI NCHEKE IN COMMUNITY CONFLICT RESOLUTION

Although matters of resource utilization were well managed under Njuri Ncheke's control, some competition did arise as the population grew and the demand for available resources increased. This competition sometimes led to conflicts between various clans requiring Njuri Ncheke to intervene. Usually, each clan was allocated land for farming and grazing, and those who contravened were penalized. To date, this is one of the active roles of the Njuri Ncheke in overseeing and enforcing rules and arbitrating in community land, forests, rivers, and other natural resources in the Ameru community.

They do arbitration on cases of encroachment on public land and forests and interference with the flow of rivers and streams,

e.g., when those upstream block or divert rivers for personal use limiting access for other members downstream.

We have taken action on those draining water for others, and we arrest them as Njuri Ncheke. When we arrest a person, they give Njuri Ncheke a goat as a penalty so they will be afraid to repeat the same mistake because they know another goat will be taken.

-Interviewee 6.

In a recent example, the Njuri Ncheke were called upon to help in unblocking a river blocked by individuals to source water for irrigation, as can be seen in Image 1.1 (below)².



Image 1.1 An illegally blocked river for extraction of irrigation water. Members of Njuri Ncheke get involved in resolving this for communities downstream to receive a share of the water. (Source: Photograph taken on Wednesday, 12th October 2022).

The Njuri Ncheke is part of a broad traditional leadership structure in Meru. Modern-day government arrangements do not formally recognize Njuri Ncheke but constantly refer to them when there is a community conflict to help resolve. This creates a dilemma between the central government structures and the Njuri Ncheke leadership in that the apparent interdependence is not recognized. This calls for an integrated system of governance where the Njuri Ncheke council is recognized by law, and their roles are clearly defined within the society. The national judicial system has recognized the role of Njuri Ncheke in boundary disputes as a community arbitrator. Where boundary cases are adjudicated by the local Njuri Ncheke council of elders, the resolutions are recognized as legally binding. However, this is a contentious issue because only some believe that a community organization not provided for by law should interfere with their property. Because the community recognizes Njuri Ncheke as part of their leadership, the government should continue working with the Njuri Ncheke council to advance resource management and environmental protection to help in sustainable use.

In one of the current real-life engagements during the course of this study, a government administrator locally referred to as an

² See also the video clip: https://www.youtube.com/watch?v=b49kL4_YbDo

assistant chief (sub-chief) asked for help from members of Njuri Ncheke to unblock a local river, Kuru. Therefore collaboration between government and community leaders could still serve to resolve fundamental community conflicts.

That sub-chief has called us to go and unblock that water tomorrow, but I have told them I am unavailable until Friday maybe to help unblock water. There is no way Njuri Ncheke can do that if chiefs will not call them and instead start to complain that Njuri Ncheke is not working, and there is nothing Njuri Ncheke cannot do. It can even go and remove those machines.

-Interviewee 8.

The emphasis here is that Njuri Ncheke remains a respected organization, and the community appreciates their contribution to maintaining peace and resolving minor conflicts among them. This observation is essential in reducing conflicts in the community but, most importantly, could be tapped to advance discussion on contemporary subjects such as climate change and climate justice.

NJURI NCHEKE, CUSTODIAN OF CULTURAL AND RELIGIOUS BELIEFS

The Njuri-Ncheke oversees and enforces the rules and regulations on using and conserving natural resources. The hallmark of conservation is enshrined in the Njuri Ncheke Shrine, located at the heart of Meru. It sits on a 20 acres piece of land, a part of over 1000 acres that include Meru University of Science and Technology. This served as the Njuri Ncheke seat of deliberations on important matters affecting the whole community.



Image 1.2: Njuri Ncheke Shrine in Nchiru Market. It serves as the headquarters of Njuri Ncheke.

(Source: Photograph taken on Thursday day 6th October 2022).

The Njuri Ncheke elders were traditionally instrumental in ensuring the conservation of natural resources. The interviewees insinuated that when the elders fully controlled the community land, it was much easy to tell the seasons, and weather patterns were predictable. There were few incidences of drought and famine that they could recall. In one interview, there was a description of a major drought known as 'Kiaramu,' meaning too much sunshine without rain. What was notable is the fact that it resulted in some members of the community leaving their homes to far-off parts of the country and not returning.

Kiaramu drought was prolonged; as you said, people moved to go and look for food. They moved from here, and some went as far as Kirinyaga because they say Meru people are in Kirinyaga. Some went as far as Kisii.

-Interviewee 5.

Before the coming of other religions, Christian mainly but also Muslim, the Ameru people held to some firm traditional beliefs and religious practices. The Njuri Ncheke could meet at the shrine to consider sacrifices to the gods during times such as prolonged droughts and famine. They would guide the people to pray when the weather patterns changed, rainfall was delayed, and food was scarce. They offered sacrifices to the gods in the form of animal sacrifices³.

If there was a change in weather patterns as it is now, Njuri Ncheke's elders had their traditions also. They would make sacrifices in a place called Mbuthugutia if it took so long for the rain to come. In the past, there was no serious climate change as it is now. It could be strange to see such dry seasons as it is now. If it became too dry, they would sacrifice a sheep, and God would hear their prayers, and rain came again.

-Interviewee 5.

NJURI NCHEKE: CHALLENGES AFFECTING RESOURCE CONSERVATION AND MANAGEMENT PRACTICES

During the interviews with the Njuri Ncheke, several challenges emerged in their efforts to conserve and manage natural resources. Economic and development activities due to increased population and land subdivision have led to excessive harvesting of trees. Many people are currently edging living vending charcoal and using timber for construction and as a source of income.

Ameru people used mud to build houses, ensuring trees were not excessively harvested like it happens today. This was indicated during the interviews with interviewee five and interviewee 10.

³ Every village has a village shrine/court where the elders meet regularly for case arbitrations: see video <https://www.youtube.com/watch?v=pDPQP0T7Ztc>



Normally, even the houses were built by getting the corner posts from branches, then they get “rafters,” and they are tied around. So only branches, not the whole tree, were necessary; you prune and get them; of course, they were using mud. That way, you can see that no trees were cut. They were well preserved because they used only the branches and “rafts.” At that time, there were no splitting trees for timbers, so there was no need to cut down trees for timbers.

-Interviewee 5.

According to interviewee 11, one of the challenges today includes abandoning active farming by young people who consider farming as an ‘old’ practice that was used as a punishment in the past, where many people were forced to labour in large plantations for very little pay or no pay at all. Even with modern mechanization, agriculture has yet to become a fashionable profession, especially for the younger generation. Many who are engaged still practice peasant farming bringing low returns and contributing to the lack of optimization of existing resources such as water. Trees were planted to provide food and shelter, ensuring people did not cut down without regard.

Other factors causing the conflicts included politics of self-interest, border disputes, family disputes arising from the polygamous arrangements in the community, land adjudication, and government policy. The impacts of the conflicts were: disruption of economic activities, environmental degradation, displacement of people, physical harm, and even death. Intervention mechanisms to mitigate conflict included the establishment of Njuri Ncheke border arbitration committees.

STUDY CONCLUSIONS

The Njuri Ncheke is an organized leadership group among the Ameru community that remains relevant in conserving and protecting community heritage. Since its inception, the Njuri Ncheke has remained influential in the community in upholding cultural values, conserving the environment, and providing leadership to the community where important decisions were made. It was easier when they were entirely in charge of community resources to manage and guide the Ameru people on natural resource utilization. Things changed with colonization when land subdivision and individual land tenure system was introduced. Although the colonialists recognized the Njuri Ncheke council and worked with them to conserve the environment, individual ownership and scarcity of resources complicated their efforts.

However, the Njuri Ncheke council of elders continues to exercise considerable influence on community-owned land and natural resources like forests and rivers, although land usage and ownership are now mainly under centralized government control. This study has highlighted the role of indigenous knowledge in sustainable resource utilization. This can form a platform for education and research institutions to maximize this knowledge to tackle the challenge of climate change. The engagement of community leaders serves the purpose of instilling ownership and responsibility as originally envisioned by the Njuri Ncheke council of elders. Kenya Methodist University has an opportunity

to play a role through research and community engagement because of its vantage and respected placement in Meru. The university would provide leadership through partnerships and community engagements that created opportunities to advance the issues of climate justice and climate action. The university can further engage by incorporating knowledge generated into its curriculum and programmes to ensure that the discussion on the role of indigenous knowledge and its contribution to climate change remains relevant. Creation of films, audio-visuals and written scripts or even demonstration farms on energy savings and conservation measures are just some of the avenues available for the university to further engage with the community.

The study has generated an essential avenue by exploring the importance of indigenous knowledge in natural resource conservation and management. It also clearly highlights the importance of community integrity and respect of community leadership in preserving cultural norms and traditions of community ownership of natural resources and, therefore, the need to be trusted custodians of these resources. The university here plays its expected role as a research institution and documents this critical element of knowledge. A second role that emerges for the university is playing a unifying role by bringing together various stakeholders that includes the sponsoring Church, the Methodist Church in Kenya, local political leaders, the county and national government, and the education sector to try and fit in the study of indigenous knowledge into the mainstream education system. The study also revealed the need for a coordinated collaboration between community leadership organizations such as the Njuri Ncheke, the county, and national governments to ensure counterproductive directions are not issued regarding the sustainable use of resources. Individual and communal responsibility was exercised by observing community rules and regulations, which the Njuri Ncheke helped to enforce.



Acknowledgments

We wish to acknowledge the funding for this qualitative study received through the "Transforming Universities for a Changing Climate" project (principal investigator Prof. Tristan McCowan, University College London). We also wish to acknowledge the members of the Njuri Ncheke council of elders for their candid conversation and time during the course of the study, the research assistants Victor Sambuli, Ann Waringa and Peter Murori and Kenya Methodist University management for their support and input.

References

- Githieya, J., & Kobia, M. (2018). The role of Njuri Ncheke in conflict resolution in the Meru region, Kenya. *International Journal of Social Science Studies*, 6(9), 101-107.
- Kariuki, J. G., & Mureithi, S. M. (2015). The role of Njuri Ncheke in sustainable land management in Meru County, Kenya. *African Journal of Environmental Science and Technology*, 9(1), 87-95.
- Kiura, J. W., & Wamicha, W. N. (2018). The Role of Indigenous Knowledge Systems in Conservation of Wetlands in Meru County, Kenya. *International Journal of Social Science and Humanities Research*, 6(2), 157-165.
- Mburugu, G. N., & Gitonga, Z. M. (2019). The role of Njuri Ncheke council of elders in environmental conservation and sustainable development in Meru County, Kenya. *Journal of Environment and Earth Science*, 9(1), 66-75.
- Muthamia, S. M. (2021). Effect of Traditional Knowledge System on Sustainable Development and Management of Natural Resources in Meru. *Journal of Public Policy & Governance*, Vol. 5(3), 112-136
- Njue, J. N., & Njeru, A. (2020). The Role of Traditional Justice Systems in Environmental Conservation and Management: A Case Study of the Njuri Ncheke Council of Elders in Meru County, Kenya. In P. B. S. Sørensen, C. M. Chitja, & P. Moyo (Eds.), *Indigenous Knowledge and the Environment in Africa and North America* (pp. 145-162). Springer





Climate-U

Transforming Universities
for a Changing Climate

About Transforming Universities for a Changing Climate

Climate change is the most significant global challenge of our time, and many of its effects are felt most strongly in the poorest communities of the world. Higher education has a crucial role to play in responding to the climate crisis, not only in conducting research, but also through teaching, community engagement and public awareness. This study contributes to our understanding of how universities in low and middle-income countries can enhance their capacity for responding to climate change, through a focus on the cases of Brazil, Fiji, Kenya and Mozambique. In doing so, it contributes to the broader task of understanding the role of education in achieving the full set of Sustainable Development Goals.

Our partners



UK Research
and Innovation



The Association
of Commonwealth
Universities