

Environmental management and African indigenous resources: echoes from Mutira Mission, Kenya (1912-2012)

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Abstract

Unlike other elements of culture, European missionaries did not explicitly dismiss home-grown ways of environmental conservation as “fetish” as in the case of cultural practices such as female circumcision. Indeed, they appreciated local resources in environmental protection as “other” ways. To this end, the article sets out to show the contribution of African indigenous resources in environmental preservation with particular reference to Mutira Mission of Kirinyaga County, central Kenya, during and after the missionary era (1912-2012). In turn, the geographical area that constitutes Mutira Mission in Mount Kenya region is dominated by the largest ethnic group in Kenya, the Gikuyu, anglicised as the Kikuyu. They constitute 22% of the entire Kenyan population of about 40 million people. In its methodology, the article uses Kikuyu cultural practices such as proverbs, riddles, rituals and so forth to demonstrate African indigenous ways of environmental preservation. The problem statement being unveiled is: How unique is the African use of indigenous resources in environmental preservation; and how does the missionary era compare with the pre-missionary era? The theoretical framework in this article is informed by John S Mbiti’s view of natural phenomena, where he contends that traditional Africans live in a religious environment where the cosmos is intimately associated with God. The materials in this article are largely gathered through oral interviews and archival sources.

Introduction

As will be demonstrated in this article, the introduction of Christianity in 1907-1912 by the English body, the Church Missionary Society (CMS) at Mutira Mission, as in the rest of Mount Kenya region, largely enhanced environmental conservation as more species of animals, trees, fruits and crops were brought in. Conversely, some of the species which were introduced, such as *Mubau* (Eucalyptus tree or Gum-tree), proved detrimental to soil conservation; for by the 1930s, residents had already discovered that it causes soil infertility. Similarly, the introduction of exotic sheep and goats meant more animals competing for resources and, therefore, eating the top cover of the soil, hence causing soil erosion. In its argumentation, the article builds on the premise that the indigenous Kikuyu people were encouraged to preserve the environment by their belief in the sacredness of nature. Therefore, the ecological concern for people in Mutira Mission was tantamount to co-working with God. The findings are thus analysed to show that the reverence of nature by the locals at Mutira Mission in particular, and Africa in general, remains significant in environmental preservation to date. Despite being a historical research, this presentation draws its theoretical framework largely from John S Mbiti’s – an African theologian – contention that traditional Africans live in a religious environment where natural phenomena are intimately associated with God.² His studies have their roots in the African conception of God, humanity and nature – a conception that implies that nature is sacred, hence the reason to conserve it. The cosmos is thus seen as part of God’s revelation and presence. When the Church Missionary Society (hereafter CMS) settled in the Mutira Mission centre in 1912, they found an indigenous society whose task in environmental protection was superb. In particular, trees were preserved through categorisations in terms of food provider, building-material provider, sacred, medicinal, and all were preserved as a religious duty. Another key issue that confronted the 20th-century English missionaries at Mutira Mission, as in the rest of the tropical Africa, was that abundant life was only seen to have been achieved when effective healing involved reconciliation with the entire cosmos – a situation that still remains true. Human beings and the cosmos complement each other to an extent that none can exist without this interdependence.³ In building on this point, Bénézet Bujo quotes H Kessler, who says:

God penetrates all his creatures with his (sic) presence. Therefore we must not treat any of his creatures (any elephant, plant or animal) recklessly but deal with them in a sensitive manner, with

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² John Mbiti, *African religions and philosophy* (Second Edition. London: Heinemann, 1969).

³ See for instance Bénézet Bujo, *The Ethical Dimension of Community: The African model and the dialogue between North and South* (Nairobi: Paulines Publications Africa, 1998), 209f.

empathy and reverence. Whoever commits a fault against a creature, commits a fault against God, the Creator himself.⁴

To this end, everyone in the community had the natural responsibility to be stewards of “mother nature” to tend to its trees, valleys, hills, rivers and habitation; a phenomenon which compares with the Psalmists’ assertion that the environment belongs to God and all there is in it (cf. Psalm 24:1). Certainly, there are African proverbs, riddles, taboos and sayings that prescribe how the pre- and post-missionary Mutira, and the larger African context, preserved the environment. Andrew A Kyomo builds on this when he says:

There is a proverb in my tribe (sic) that says: ‘The forest is our skin and if one removes the skin of a human being, the result is death.’ Death is at the door. We do witness the shortage of rain because the climate is affected by the destruction of the environment. People are no longer bound to our traditional African worldview. Modernisation is dominant to the extent that the culture of profit and money is made to have priority over humanisation. Money as a thing is above the worth of a human being. In such a situation, life is threatened by death.⁵

Among the Kikuyu neighbours, the Maasai nation,⁶ the belief in the genesis and existence of heavenly objects and phenomena is an area that underlines their religious consciousness. Such objects and phenomena include: the stars, sun, moon, clouds, mist, rain, falling stars, wind, eclipses of the sun and the moon, thunder and lightning, rainbows, and storms. They manifest the presence of the Creator.⁷ Interestingly, even creeping creatures like the “dreaded” snakes are seen as important players in the ecology as they were believed to be sacred; manifesting the spirits of the departed forefathers. In their beliefs that connect them to the “mother nature”, the Maasai held that the soul of a rich or important person in society turned into a snake. As the departed forefathers returned to visit their relatives, they came in form of creeping snakes. It is from this background that the traditional Maasai society did not deliberately kill snakes.⁸ Similarly, animals, plants, vegetation, heavenly bodies and significant geomorphologic formations like rocks, holes, mountains, caves and hills are viewed as God’s manifestations, hence the reason for care.

Missionaries’ experiences at Mutira

As the missionaries began the process of establishing a centre at Mutira village from 1908 to 1912, they found that the local inhabitants had what they called sacred places, trees, caves and hills among others – which were greatly revered. In particular, sacred trees such as *Mugumo* also called *Ficus thonningii*, *Mukuyu* (fig tree also known as *Ficus sycomorus*), and *Muu* or *Markhamia hildebrandtii*, among others, could not be cut recklessly as they were “trees of God” where sacrifices were conducted in times of need. In turn, the missionaries at Mutira did not disappoint even though they tried to portray the God of Christendom as more superior to the African God. Unlike the case of female circumcision which they outrightly dismissed as evil, barbaric and unhygienic – hence the 1930s African protests against cultural suppressions – the African ancestral ways of preserving nature was easily understood as “other ways” though not necessarily the better way out.⁹ In some cases, they built churches in the so-called sacred places. This helped Africans to see the continuity of African religion and the new religion (Christianity). In particular, the current Kagumo Catholic Church is built where Ethaga made their sacrificial worship, particularly whenever rain failed.¹⁰

Informal environmental education in pre-missionary Mutira embraced awareness and sensitivity to issues of nature preservation, dissemination of knowledge in environment conservation via stories, riddles, songs, proverbs and taboos, as well as through participation in sustainable resource use and other eco-friendly activities. Strict instructions were given to the young by the elders (*aramati*) using stories, riddles, slogans,

⁴ See Bénézet Bujo, *The Ethical Dimension of Community*: 215.

⁵ Andrew A. Kyomo, “The environmental crisis as a pastoral challenge in Africa,” in *Theology and environmental responsibility*, ed. J. N. K. Mugambi and Mika Vähäkangas, 57-63 (Nairobi: Acton, 2001), 60.

⁶ The Maasai people are found in both Kenya and Tanzania and to an extent in all the countries of East Africa. As pastoralists, they move with herds in search for greener pastures. As time goes by the Maasai are settling in designated places of East Africa; hence their movements have subsided, especially in the second half of the twentieth-century.

⁷ Samson K. Gitau, *The environmental crisis: a challenge for African Christianity* (Nairobi: Acton, 2000), 48.

⁸ Doris Wagner-Glenn, Searching for a Baby’s calabash: *A study of Arusha Maasai fertility songs as chrystallized [sic] expression of central cultural values* (Ludwigsburg: Philipp Verlag, 1992), 131.

⁹ For details see, Julius Gathogo, “Missionaries and Colonial Authorities in Kenya,” *Swedish Missiological Themes*, 96 (1) (2008), 43-70.

¹⁰ It is during Butcher’s stewardship that Ndia Division experienced two severe droughts, one in 1921 and the other in 1924. In turn, these droughts threatened both humans and animal lives. To counter its damage, medicine men and the rainmakers from Ethaga clan attempted to bring down rain by conducting their rituals without success compared to Butcher, who in both occasions, successfully prayed for rain (for details see Julius Gathogo, *Mutira Mission: An African Church in Kirinyaga comes of age* (Limuru: Zapf Chancery, 2011), 14.

tales, poetry, commentaries, proverbs, sayings and songs with the intent to teach them about conservation of the environment.

Classification of trees

Africans preserved the environment by first designating or classifying trees in their bid to show their respective importance. That is, some were classed as building trees (refer to *Mukoigo* or *Bridelia micrantha*); medicinal trees (refer to *Mukoigo* or *Bridelia micrantha*, *Muiri* or **Prunus Africana**, etc); poisonous trees (such as *Rucago* also called *Maesopsis eminii* whose dust – *Muguruka* – made people blind); trees that mark the boundaries (refer to *Muu* or *Mankhaima lutea*, *Muigoya* or *Plectranthus barbatus*, *Kariaria* or *Euphorbia tirucalli* also called *Finger euphorbia*, *Mucimoro* or *Lantana camara*, etc); trees that provided detergents for washing (refer to *Muu* or *Mankhaima lutea*); and others as sacred trees (refer to *Mugumo* or *Ficus thoorningii*, *Mururi* or *Trichilia emetica Vahl*, etc). Some trees were regarded as sources of material culture; and one was allowed to use small trees on the fringes of the forest for purposes of making material culture items such as farming sticks (*miro*), clubs (*njuguma*), and walking sticks (*mukwanju*), provided no man-made tools were used in the process. However, under no circumstances could one use wood from the sacred trees for house building.

Forest as hideouts (*kihitho*)

The local Mount Kirinyaga Forest was seen as a hiding-place (*kihitho*) particularly when there were inter-ethnic or inter-clan feuds. Maasai invaders were a common occurrence. In such scenarios, women, children, the elderly and animals were hidden in the forest during raids by enemies (*maitha*) who occasionally came to either plunder or steal livestock. To guard the secrets, only the members of the nine local clans would be allowed to go inside the forest during the turbulent moments. Hence, the forest was not just used by the Mau Mau fighters of independence in the 1950s, but had been used since time immemorial by the entire rank and file of the society whenever circumstances dictated so.

Another indigenous use of the local forest was in the regulation of local weather. From the ancient times, the people of Mutira have always known Mount Kirinyaga as the one that “pulls” the rain from the high skies. Indeed, the power of Kirinyaga forest to attract rain clouds has been one of its major attributes. A common saying is still true: *Kirinyaga kigucagia mbura* (“Mount Kenya forest pulls or attracts rains”). Hence, trees inside and outside of the local forest were classed differently or were seen as playing divergent roles – that eventually preserved the environment.

Besides being hideouts, various Kikuyu proverbs demonstrate other critical roles that trees and forests play. They include: *Ngoro ni mutitu mutumanu* (it literally means: “The human heart is a very thick forest”; and/or *Mutitu uri ngoro ndunagwo ngu igathira*, which literally means: “A forest that has a heart is never depleted or destroyed as we fetch firewood” (interview with Mugo Muhia, 21.06.13). The two proverbs above imply that forests are as important as the human heart, as humanity cannot function without either the forest or the heart. Hence, it reminded those who constantly fetched firewood from the forest to do it sparingly lest they destroy the forest. Certainly, the image of the human heart and its centrality to human life demonstrates its critical role to the indigenous society. Additionally, forests were traditionally seen as sources of refuge particularly during war times, as in case of the Mau Mau war of independence (1952-1960) – noted above. It is also the places where rivers originate. Coupled with this, forests in the traditional society were seen as sources of food. Thus, this comparison as inherited in the above two proverbs explains the central place that the forests held among the members of the Gikuyu (anglicised as Kikuyu) society.

Totems and taboos

A totem is a plant or animal species used by a clan or community as their symbol. Members of a particular Kikuyu clan were not allowed to harm that particular plant or animal species and this led to the conservation of species. For instance, among the Kalenjin and Kuria communities, different wildlife, such as leopard, lion, crane, and certain insects were considered clan totems. Among the Kikuyu, names like *Ngari* (leopard) and *Njogu* (elephant) were and are still very common. They were symbolic in that those given such names were believed to share some positive characters of the animals. *Njogu* was associated with a very strong person, while *Ngari* symbolised courage. Though destructive, these associations endeared them to the community and the animals were, therefore, considered valuable.

In general, African totems may include an animal, insect or plant, and it is forbidden to eat or to destroy any of those that are regarded as totems. This moral view thus places conscientiousness on each member of society to prop up ecological sustainability through fortification of totems against harm and destruction. For instance, marriage between people of the same clan is a taboo and prohibited. The reason for this was to avert the possible spread of hereditary diseases (such as sickle cell anaemia), an aspect of preservation of life. Again,

marrying from other clans was ideally intended to uphold harmony and togetherness among the nine clans that constitute the Kikuyu nation. The totemic system is one of the few surviving and respected cultural practices in Mutira Mission.

Again, taboos associated with the local forest (Mount Kirinyaga anglicised Kenya) include:

Taboo	Sanctions if one broke environmental taboos
No one is allowed to cut a tree with any human made tool but only with the help of a blunt stone.	If anyone breaks this taboo, he/she must produce a sheep (<i>ndurume</i>) for a cleansing and purification ritual to be undertaken on him and the forest.
No setting forests on fire.	A person who accidentally or deliberately set the forest on fire had to produce a sheep (<i>ndurume</i>) for cleansing and purification rituals.
No reckless collection of firewood in the forest.	Only at appointed times within a year was collection of firewood allowed; and even then, it was closely supervised by elders. It is only dry wood that can be collected, for one cannot cut a green tree.
It was strictly prohibited to hang beehives on trees inside the forest.	Cleansing rituals done if it happened otherwise God would punish the society.
One cannot fight or engage in other acts of violence within this forest.	Cleansing rituals done if it happened otherwise God would punish the society.
Sexual activities were not allowed in the sacred forest.	Cleansing rituals done if it happened otherwise God would punish the society.
It was strictly prohibited to kill any animal, and particularly <i>Nugu</i> (Colobus monkey).	In case it happened, cleansing and purification rituals for the culprit and the forest were urgently conducted.
A baby who has not undergone the traditional ritual of the first shaving is not allowed to enter into this forest.	In case it happened, cleansing and purification rituals done urgently to avoid God's wrath.
Wood from sacred forest was never used for construction of houses.	In case it happened, cleansing and purification rituals done urgently to avoid God's wrath.

Ancestral spirits

In the neighbouring Kabare mission centre, established in 1910, the banks of the Mukindu River were believed to have ancestral spirits at work – a phenomenon that dissuaded anyone from destroying the “mother nature”. Likewise, the Ruthu River, near Mutira Mission centre, had a similar story with that of the former. Joseph Gatimu (interview 21.03.13) recalls his father telling him that they used to hear strange noises from the bush around the river banks. Hence, the vegetation around the river banks was not interfered with because, it was believed, the spirits of the ancestors would hit back. The ripple effect was that water catchments areas were preserved and the streams were not drying up as is the case today. Today, the streams have dried up after the latter generations disregarded such religious beliefs and dismissed them as “superstitious and not modern ways”.

With the introduction of Christianity, trees were used to improvise Sunday school classes – particularly in areas such as Kiranja, where there were no church buildings even by the 1960s (interview with Joseph Kariuki Gatimu, 21.03.13). Trees such as *Muhuti* (flame tree) – a tree which was used for carving – hence a special tree whose bark was used to carve letters – as a learning material or as a teaching aid, could not be destroyed; rather, it was revered.¹¹ In his primary school days, in 1970s, Gatimu avers that the indigenous and missionary spirit of environmental preservation was still intact, as opposed to the 1990s onwards, for people deliberately avoided disturbing or hurting the cosmos.

Water as a symbol of life

The duty to preserve the environment was strengthened by the reverence for water. Among the Kikuyu in the Mutira Mission, water was regarded as the symbol of life. The saying *mai ni muoyo* or “water is life” underscored the importance of water as an essential constituent of life. To this end, all efforts were made to safeguard the watering places. As Samson Gitau notes, such places were

communal and were given the name iriuko (singular), Mariuko (plural). Land that surrounded the watering places was considered as “No Man’s Land.” In some cases, people from adjacent ridges converged here for ceremonial dances. Both river and stream water was regarded with a lot of respect. Proverbs and taboos were formulated to ensure that water was not contaminated by any

¹¹ Its botanical name is *Erythrina abyssinica*: the common name is flame tree or Red Hot Poker Tree. It is also called Luck Bean Tree.

form of pollution. For instance, one could not defecate in water. The Kikuyu saying “*Uyu unanite akamia rui na iguru*” [this one is extremely naughty that he excretes in the river] expresses two truths. Firstly, the saying expressed an extremely mischievous person who excreted on water. Secondly, it showed that the Kikuyu possessed hygienic knowledge on the disastrous effects that could befall anybody who made use of polluted water. [For] people were aware of the fact that polluted water could lead to waterborne diseases. However, access routes and watering places (Mariuko) were always left open to all. Any traveller could not be denied drinking water.¹²

In the nature of things, Priscilla Mbogo (interview 25.03.13) explains that the Kikuyu saying *ndugeke waganu*, meaning “avoid wicked behaviours”, had a lot to do with cautioning the people to avoid acts that pollute water pollution and the care for environment in general. Indeed, it was a taboo to pollute water; for such acts, whenever they happened, resulted in dire consequences from Ngai (God). A case in point is seen in Mwea plains where the rice farmers in 1980s conspired to poison all the birds that were allegedly messing up the rice farms. Rather than erecting scarecrows and effigies in the farms so as to scare the birds, they chose to destroy them. By killing the “innocent” birds, the locals went against the cautious Kikuyu saying that was well known to them—*ndukanorage kiumbe kia Ngai* (“one should never deliberately destroy any of God’s created beings”).¹³ Consequently, it rained so heavily that all the rice fields were flooded with excess water, thereby making it impossible for farmers to harvest anything during that season. In the local people’s interpretation, it was God who was punishing them for killing the birds and thereby messing up nature. In the farming season that followed, farmers avoided killing the birds after which they yielded good harvests (interview with Maina Wachira, 16.04.13). Thus, the belief that certain disasters would befall the society if water, or the environment in general, was messed up made people take great caution when serving the mother nature. It also encouraged people to be more responsible. Indeed, it was a communal duty to protect water catchments areas and the general usage of water and the entire environment. Undeniably, it is water mixed with herbal concoctions that were used by the priests during the cleansing ceremonies.

Agro-ecology

With regard to agro-ecology, indigenous people practised mixed farming where organic manure in the form of plant remains, cow dung and urine, and chicken droppings was applied to gardens to improve soil fertility. Compost pits were dug for proper disposal of rubbish and refuse. This decomposed manure was applied to gardens to improve their fertility. Moreover, the local Kikuyu at Mutira used to deploy animal manure and vegetable waste to fertilise their lands. As Samson Gitau says,

Animals and vegetable waste are good sources of organic fertilizer which tended to promote organic farming. The use of nitrogen fixing pulses in mixed cropping, growing of plants of different patterns, maturity and duration assisted significantly in stabilizing soil fertility and prevention of soil erosion. In addition, the practice was an effective way, biologically, of managing pests and diseases. It also conserved biodiversity of animal and biannual crops and plants while reducing labour costs.¹⁴

In addition, trees were planted in gardens to provide shade for the plants, to act as wind breaks, and also to demarcate people’s farmlands and homes. Reviving organic agriculture would help conserve water, mitigate climate change and ensure sustained biodiversity.

Agro-ecology in the pre-missionary Mutira is also seen in the shifting cultivation. In turn, shifting cultivation is an agricultural system in which plots of land are cultivated temporarily, then abandoned and allowed to revert to its natural vegetation while the cultivator moves on to another plot. The main reason for the constant shifting is to avoid soil exhaustion on the one hand, and to protect the species of insects, animals and plants on the other (interview with Wilson Murimi Kinyua and David Kiragu, 24.03.13). Indeed, there was a strong belief that if the flora and fauna are destroyed, a disaster would befall the community.¹⁵ Another reason why the indigenous people left their gardens to rest for a particular period was to let the parcels of arable land

¹² Samson K. Gitau, *The environmental crisis: a challenge to African Christianity* (Nairobi: Acton, 2000), 44.

¹³ The saying that “one should never deliberately destroy any of God’s created beings” resonated well with the book of Leviticus 19:9, where humans are obliged to preserve the natural order of creation that is God-given.

¹⁴ Samson K. Gitau, *The environmental crisis*: 131.

¹⁵ The term **flora** is often used to cover all plants, fungi, and algae in a given environment, while **fauna** refers to the animals that live there. The scientific definition of flora and fauna is the plants and animals that live in a particular area or time. The difference between them stems from whether plants or animals are being discussed. In botany, or the study of plants, flora actually has two distinct definitions. First, it can mean the plants of a given environment or period of time, or it can refer to a book or such work that describes plants with the aim of identification.

regain their fertility. This rotational method of cultivation was favoured by farmers because “it gave them an opportunity of getting a new field every four or five years”.¹⁶

Exotic versus indigenous

Certainly, the 20th-century European missionaries found indigenous trees in Mutira that were classed according to their respective roles. As they established Christianity in the locality, they did not explicitly oppose the indigenous ways of conserving the environment; rather, as will be seen later, they added a variety of new species. Thus, they introduced exotic species of trees (as will be seen below), animals (refer to grade cows such as Gurnsey, Freshian, Jersey, Ayrshire and beef cattle such as Charloris and Sahiwal among others); exotic goats such as the Torgensberg, German Alpine, Aglo Nubian, etc; and exotic sheep such as Merino and Dorpa), fruits such as mangoes, oranges, pineapples, papaws, guava, macadamia, lemons, plums, apples, peaches, and pears; and exotic foods (maize, beans, Irish potatoes, and new banana species). In the 1930s, the missionaries introduced coffee and tea as cash crops.

Although many people from India, Arabia, and China had visited Kikuyu-land much earlier on trading expeditions, the first Europeans to come into the interior were missionaries and adventurers such as: Dr Ludwig Krapf (1810–1881), John Boyes (nicknamed by the locals, *Karia-njahi*)¹⁷ and Joseph Thomson (1858–1895).¹⁸ Writing back to Britain about his journey through Kikuyu-land in 1883, Thomson appreciated the hard working locals and the nature and value of indigenous foods and animals, thus:

Enormous quantities of sweet potatoes, yams, cassava, sugarcane, Indian corn, millet, etc., are raised, and the supplies seem to be quite inexhaustible... at Ngong, we carried away three months' provisions, yet it did not seem perceptibly to affect the supply or raise the ridiculously low prices. Extremely fat sheep and goats abound, while the Kikuyu have also cattle in numerous numbers.¹⁹

In this article, only some species of exotic and indigenous animals will be briefly surveyed, to which we now turn.

Exotic and indigenous animals

To an extent, when the missionaries introduced exotic animals in the 1930s, it appeared to improve the economic well-being of the locals. There was more meat and milk from cows and goats. Additionally, African farmers in Mutira, who were now encouraged to keep less animals in zero grazing units, contributed to the conservation of the environment when they began to use bio-gas. In turn, bio-gas is a by-product of cow dung and urine – where it is extracted from. It is used for cooking or running generators or lighting up a home. In using bio-gas, there is less cutting of trees for firewood. The introduction of exotic animals (*bos-taurus*) in Mutira Mission changed people's lifestyles as it lessened the need for keeping many indigenous animals (*bosindicus*) whose economic value was not adding up in the new economic dispensation. Indeed, as the large numbers of flocks were kept, their trampling and eating up of vegetation cover easily exposed the bare soil to erosion. But again, by introducing exotic goats such as *Torgensberg*, German *Alphine* and *Aglo nubian*, the missionary efforts led to environmental degradation as the increased population of goats fed on the plants. Characteristically, goats prefer feeding on the buds of growing trees, hence discouraging their growth. Unlike cattle, whose feeding habits are limited to grass and other shrubs, goats feed on all plants, regardless of whether they are poisonous or not; hence viewed as harmful to the environment. Further, the introduction of exotic sheep such as Merino and Dorpa increased the population of sheep. Previously, there were only indigenous sheep such as red Maasai. This in turn increased the destruction of the environment as sheep ate the grass cover till the soil got exposed. Hence, it made the soil prone to erosion. The situation worsened where the population of exotic sheep was big; for more pasture was now required in order to cater for their nutritional needs. As such, creation

¹⁶ Samson K. Gitau, *The environmental crisis*: 42.

¹⁷ John Boyes established a trading network in central Kikuyu-land with the help of Karuri of *Metumi* people (referring to inhabitants of the former Mbiri district), in 1898.

¹⁸ Joseph Thomson (14 February 1858 - 2 August 1895) was a Scottish geologist and explorer who played an important role in the Scramble for Africa. He excelled as an explorer than as an exact scientist. He avoided confrontations among his porters or with indigenous peoples, neither killing any inhabitant nor losing any of his team members to violence. His motto is often quoted to be: “He, who goes gently, goes safely; he, who goes safely, goes far.” In 1883, he embarked on a Royal Geographical Society (RGS) expedition to explore a route from the eastern coast of Africa to the northern shores of Lake Victoria of East Africa. In the course of duty, Thomson's health deteriorated because of cystitis, schistosomiasis, and pyelo-nephritis. In 1892, he contracted pneumonia and, seeking the right climate in which to recuperate, spent time in England, South Africa, Italy, and France. He died in London in 1895, at the age of 37.

¹⁹ Mutu wa Gethoi, “Historical background” in Njenga Karume, 2009. *Beyond expectations: from charcoal to gold* (Nairobi: Kenway publications, 2009), xvii.

of pasture lands for sheep now required that more trees and bushes had to be cleared; hence a detriment to the environment (interview with John Kiragu Cira, 24.03.13 and Alice Wakanugu, 25.03.13).

According to John Kiragu Cira (interview 24.03.13), a specialist in animal studies, the introduction of *bos-taurus* or exotic cattle by the European missionaries in Mutira did not help in preserving the environment. Why? The exotic cattle required bigger acreage of land to sustain their nutritional requirements. Hence, the need to clear the forest covers in order to plant fodders so as to sustain them. On the other hand, the introduction of store feeding, later zero grazing, discouraged the use of organic fertilisers which are detrimental to the soil – particularly if not used in the recommended amount and time. Equally, the indigenous people would from time to time mess the environment when their huge and unmanageable herds ate and trampled the soil thereby loosening it, hence causing soil erosion. For as the grass was eaten and left bare, erosion easily took place, hence, the Kikuyu saying *ng'ombe nyingi itiri thumu*, meaning, “Many herds of cattle do not produce manure”. This was meant to dissuade the locals from keeping large flocks that were unmanageable and were eventually detrimental to the environment.

The preservation of animals, including the domestic ones, was a duty that was carried with zeal. Although the locals at Mutira wore animal skins before 1912, they could not easily kill animals in order to get garments. Indeed, there were specialists who prepared these traditional garments. In the case of men, specialists for their attires were always men; while women’s garments were made by women. Additionally, women were generally responsible for making garments for the children. In view of this, Njenga Karume (1929-2012) explains as follows:

On [the European settler farm] Delamere’s ranch, Africans were not allowed to keep cattle so that adults wore sheepskin as well. Such a sheepskin would have to come from native [or indigenous] sheep. If any African was caught with the skin of a Merino sheep (the breed favoured by the settlers), he could be put in prison ... After slaughtering an animal, the skin would be stretched in the sun until it was dry. Afterwards it would then be thoroughly flayed with sticks to soften it. Next, animal or castor oil would be applied to make the skin even softer ... Clothing was never regarded as an issue of style, its purpose was merely to cover nakedness and protect against the cold, especially July’s *gathaano* or August’s misty *mworia nyoni* which was so cold that some tropical birds dropped dead from the bushes ... We would wear these garments without changing them, for as long as they lasted, but animals were never slaughtered just for the purpose of making clothing. We had to wait until a goat or sheep was slaughtered, or died, before we could get fresh clothes. Some time after I was born [in 1929], cotton clothes became much more common and my father and uncles started buying shirts and shorts.²⁰

Indigenous trees that the missionaries found

Indigenous trees, in Mutira Mission, refer to those that were there before the missionaries introduced other species of trees in the 1920s. They include:

“*Muringa*”, also called “*cordia abyssinica*” in botanic language

According to Karuru Gathogo (interview 25.03.13), a local environmental scientist, it is a handsome tree with white flowers. Additionally, it has high quality timber which in turn has a high quality cabinet-making wood.

“*Muiru*”, also called “*Prunus africana*” in botanic language

As the missionaries at Mutira found out, it is a medicinal tree that cures prostrate cancer among other related diseases. According to **Evelyne Ogutu**, Kenya is unscrupulously losing tonnes of *Muiru*, an indigenous tree species to Europe where it is used in the manufacturing of a cancer drug.²¹ Indeed, the post-missionary Mutira is badly affected by environmental degradation and the situation is getting worse day by day. By way of illustration, on 1 April 2003, the then Kenyan Deputy Minister of Environment, the late Professor Wangari Maathai (1940-2011), the 2004 Nobel Peace Laureate, appeared in the Kenyan media and decried the wanton destruction of certain indigenous tree species such as the *Muiru* (*Pinus africana*). She noted that because the tree has medicinal value, it had become extinct in Mutira Mission area and Kirinyaga County (of Kenya) in general, because its bark had been harvested and exported by unscrupulous business people.²²

²⁰ Njenga Karume, 2009. *Beyond expectations: from charcoal to gold* (Nairobi: Kenway publications, 2009), 4-5.

²¹ See **Evelyne Ogutu**, “Campaign to save threatened African tree,” East African Standard, http://www.bgci.org/index.php?option=com_news&id=0207&print=1 (accessed April 1, 2013).

²² <http://www.eastandard.net/national/nat01042003005.htm>.

“Munderendu” tree also called “Teclea nobilis” in botanic language

This is another indigenous tree which was heavily treasured by the locals in Mutira before and after the missionary era. Its medicinal leaves are used to treat cattle. Just as in the above case, the *Munderendu* tree is an endangered species as it is unscrupulously cut. As one Forester in the neighbouring Mount Kenya forest noted, “in our patrols, we met two old women walking towards a recently cut *Munderendu* tree also known as *Teclea nobilis*. Upon seeing us, they stopped and requested us if they could chop firewood from the cut tree and we did not allow them because it is not allowed”.²³

“Mukoigo” tree also called “Bridellia macrantha”

Mukoigo is another indigenous tree in the pre- and post-missionary Mutira. It has thorny stem with compound green leaves and no showy flowers. Considering that its fencing poles are not easily attacked by deterioration agents such as pests and fungi, it was largely used as a building material. Hence, it was preserved. In her research assignment at Mutira in 1992, Jean Davison, a visiting American scholar, noted the medicinal value of *Mukoigo* tree as well. She says, as the newly born child was born “some parasitic plant from the *Mukoigo* tree was brought to me [by midwives] and I chewed it and the liquid from it was given to the baby to prevent him from having stomach upsets”.²⁴

“Muratina” tree also called “Kigelia africana” is locally called sausage tree

When its seeds are removed from the seed pod, it is used in the manufacturing of traditional beer – which the incoming missionaries opposed vehemently as barbaric and satanic. It’s also used as a scrubber when washing of the body and/or utensils. It stores yeast (fungi) which is also medicinal; hence it helps in beer fermentation.

“Mukinduri”, also called “Croton megalocarpus”

This is another indigenous tree which was revered by the locals prior to the missionary era. Its seeds contain oil and are used in making bio-diesel for vehicles. It was also used for firewood and shade, especially in the home compound (interview with Karuru Gathogo, 24.03.13).

“Mbariki” also called Castor tree

Its seedlings produced oil that served many purposes. First, it was used for not only body ointment, but more importantly, in softening skin clothes (*njua*). Additionally, its oil was used to cure constipation. Additionally, its seeds were used to control conception (interview with Jeremiah Ngogi, 27.03.13).

“Matomoko” (custard apple) and other indigenous fruit trees (IFTs)

The advent of Christianity in Mutira in early part of the 20th century found indigenous fruit trees which were usually scattered throughout the forest at a distance from the homestead. Generally, it was children who gathered fruits, when they were herding cattle and/or helping with other duties on the farm. Women also gathered the fruits which were ripe and had fallen to the ground when collecting firewood, while men were usually engaged in other activities and rarely played a role in collecting fruits. Certainly, fruits were often valued by local communities for their medicinal properties, such as baobab leaves which help to protect food from bacteria. Other fruits included: *matomoko*, *mbota*, *mbera*, *metuya*, *nganayu*, *mbiru*, *ndare*, *nathi*, *nagu*, *ngoombo*, *thigiya*, and *ngambura* to mention a few (interviews with Mugo Njogu, Kinyua Kathenwa, 24.03.13-25.03.13). To date, indigenous fruit trees (IFTs) have various benefits such as enhancing nutrition and food security, but face threats of deforestation and genetic erosion. Besides being part of the local diet, indigenous fruits enhanced the attachment between people and the forest. As Kariuki Thuku and Mumbi Murage rightly note, certain fruits appeared in a particular season of the year and they relayed special eco-message[s].²⁵ Hence, the community had discrete understanding of the eco-cycles and the import they brought into their lives regarding eco-guardianship and the elevation of their social wellness. Today, in 2013, one can hardly find any of the above fruits simply because the 20th-century European missionaries introduced exotic fruits which appeared to grow faster.

²³ <http://ngongforest.wildlifedirect.org/category/uncategorized/page/10/>.

²⁴ Jean Davison, *Voices from Mutira: change in the lives of rural Gikuyu women, 1910-1995* (London: Lynne Rienner Publishers, 1996), 183.

²⁵ For details, see Kariuki Thuku and Mumbi Murage, *Eco-socio-cultural profile of the Karima forest: A case study* (Nairobi: Porini Trust Foundation, 2006).

Some exotic trees

As the European missionaries admired the use of African ancestral resources in environmental preservation in Mutira Mission, they too stamped their mark by introducing new species of trees, animal breeds, fruits and food crops. Hence, some of the exotic trees that were introduced include:

“Mutarakwa”, also called “Cupressus lusitanica” otherwise called Cypress tree

According to wikipedia, the scientific name *lusitanica* (of Portugal) refers to its very early cultivation there, with plants imported from Mexico to the monastery at Buçaco, near Coimbra in Portugal in about 1634; these trees were already over 130 years old when the species was botanically described by Miller²⁶ in 1768.²⁷ It is widely cultivated, both as an ornamental tree and for timber production, in warm, temperate and subtropical regions around the world. It was introduced in Mutira Mission around 1927 (interview with Alice Wakanugu, 25.03.13).

“Mucababunduki” (Pine) also called “Pinus radiata, Pinus caribea” among other species

Like other trees introduced by the missionaries and the colonial (British) government in 1920s at Mutira, Pine trees, also called locally as *Muremanugu*, preserves the environment by not only bringing fresh air but, more importantly, through its branches which are in whorls, hence it is good for shade. Its resin and rosin (*ngamu*) are used in confectionary (bread-making) industries. Interestingly, it grows faster than the indigenous trees in Mutira Mission and its environs (interview with Karuru Gathogo, 25.03.13).

“Mubau” (Eucalyptus tree or Gum-tree)

Like most of the exotic trees that were introduced by the missionaries in 1920s, in Mutira Mission, species of Eucalyptus tree grow faster than the indigenous trees discussed above. Their seeds are pot-like and grow in clusters (*tukundi*). Some of its species are medicinal. For example, *Eucalyptus Globulus* has menthol that treats flu (influenza).²⁸ Other species produce oil that can be used for cleaning and as a natural insecticide. Other Eucalyptus species introduced in Mutira Mission in 1920s include: *Eucalyptus saligna*, *Eucalyptus paniculata* (interview with Karuru Gathogo, 25.03.13). Conversely, despite the Eucalyptus tree being an excellent industrial species, providing timber for poles, pulp and fuel-wood, it cannot be used as fodder plant and provide other non-timber uses, limiting its role as a social forestry tree. By the 1930s, the indigenous people at Mutira Mission had started complaining that it was causing soil infertility rather than improving upon it. Why? Eucalyptus is water-intensive and destroys the soils and the underground water table. Thus, the locals at Mutira considered it invasive, when they realised that its water-sucking capabilities had begun to threaten water supplies. By the 1930s, they had begun to appreciate that the tree also releases chemicals into the surrounding soil which kills indigenous competitors thereby hurting the environment for which it was ironically planted to preserve (interview with Alice Wakanugu Ntaire, 25.03.13).

“Mukima” tree (“revillea robustais”) also called Australian Silkwood

Its common name is Silky Oak or *Mkima grevillea*. It originally came from Australia where it is called silky oak, for the fine hairs on the leaves; while the Kikuyu have dubbed it *Mukima*, after the “monkey-eared” colonial extensionist, who probably had the task of spreading it. Unlike the environment unfriendly *Mubau* (Eucalyptus) tree, the introduction of *Mukima* tree in the 1920s was greeted with deep appreciation by the indigenous people of Mutira. Why? Unlike the former, it did not have a detrimental effect on the fertility of the soil. Rather, it grew among both indigenous food crops (arrow-toots, sweet potatoes, yams, sugar cane,

²⁶ Philip Miller FRS (1691 – 18 December 1771) was a Scottish botanist. He obtained plants from all over the world, many of which he cultivated for the first time in England and is credited as their introducer. His knowledge of living plants, for which he was elected a Fellow of the Royal Society, was unsurpassed in breadth in his lifetime.

²⁷ See http://en.wikipedia.org/wiki/Cupressus_lusitanica (accessed April 1, 2013).

²⁸ Characteristically, menthol is derived from the herbs peppermint, eucalyptus and pennyroyal. Menthol is a compound made from herbal volatile oils that has many potential health benefits. Applied topically or taken orally, menthol has been shown to help treat gastrointestinal problems, pain, inflammation and congestion. It has been used to help treat a wide variety of gastrointestinal ailments. For example, menthol can prevent or treat gas and bloating, making it a potential assistive treatment for irritable bowel syndrome, indigestion and colic. Menthol can also be applied topically to help to relieve itching and inflammation due to contact dermatitis and hives. Topical menthol also helps to relieve headaches. Additionally, people have taken menthol orally to treat asthma, bronchitis, colds, flu and other respiratory ailments. For details, see: <http://www.livestrong.com/article/187048-what-is-the-use-of-menthol/#ixzz2PDHXeLwC>.

sorghum, millet, Kikuyu maize, Kikuyu bananas, etc) and exotic food crops (refer to Irish potatoes, new varieties of maize and banana species, etc); and even among cash crops that were also introduced by the missionaries and the colonial authorities (refer to coffee Arabica and tea, etc). It also grew concurrently with both indigenous fruits (refer to aizen, balanites, baobab, butterfruit, ebony, marula and tamarind)²⁹ and exotic fruits (refer to apples, plums, peas, peaches, guavas, mangoes, macadamia, etc). It is good for fodder (*irio cia ng'ombe*) – as its leaves can be fed to animals when there is scarcity of food.³⁰

“Muthanduku” (Wattle tree) also called “Acacia mearnsii De Wild”

Its bark (*magoko*) is used in making tannin. In turn, tannin is a chemical used in making shoe polish. In Kenya, we have Kenya Tanning and Extract (KTE) in Thika Town – which used to make shoe polish using wattle bark (*magoko*). Another example is East Africa Tanning and Extract (EATE) in Eldoret. Thus, although the missionaries persuaded the locals school pupils in 1927 to walk to Kerugoya Town, a distance of eight kilometres from the Mutira Mission centre to collect a variety of trees, so as to protect the environment in a “better” way, it is critical to appreciate that some of these trees were for commercial purposes, particularly if we refer to Wattle and Eucalyptus trees. In some cases, some of the newly introduced trees became a threat to the environment.

Avocado also called “Persea americana”

The scientific name, *Persea americana*, tells us that its origin was in the Americas, specifically in Central America and southern Mexico. It's an edible fruit which is said to be rich in protein, vitamin and fats. Its fat is used in soap making. It's also used in making shampoo (hair conditioner).

If there were no trees ...

Indeed, the importance of trees is highlighted in the local Kikuyu proverb that was constantly cited: *Mwene thi agire gwa gukoma agikoma muti iguru* (“The owner of the earth lacked somewhere to sleep and instead slept on top of a tree” (interview with Jane Wanjiku Mwangi, 25.03.13). Being seen as a prophetic proverb, its fulfilment was seen to have taken place after the introduction of Christianity in the locality. First, it used to teach that God lacked a place to sleep on earth despite being the creator only to find solace in trees, hence the need to tend trees passionately. Second, the proverb compares with another that says: *Muti utegutemwo ndugerekagwo ithenwa* (“You do not point a hatchet to a tree that is not about to be cut down”). It cautions against reckless cutting of trees, hence showing its reverence – as trees can also save even the owner of the farm. Third, the fact that Jesus Christ, the third person in the Trinity, was crucified during Good Friday appears to confirm the prophecy that trees have a huge solution to complex problems in this planet. Indeed, as Prof Wangari Maathai once wondered: “If there were no trees how would Jesus have been crucified? Would he have been crucified on stones?”³¹ Clearly, pre- and post-missionary Mutira reveres trees as evidenced by the green compounds that are visible in the countryside; but more importantly so as to usher in fresh and clean air.

Fourth, the importance of trees in environmental conservation is made clear in the fact it is the combination of trees that “graduate” into a forest. Thuku and Murage cite the case of the neighbouring Karima forest, in Nyeri County, where major social festivities took place. After a long period of handiwork, the locals assembled to share feelings, express social harmony, celebrate life, foster brotherhood and reaffirm their attachment with nature. In particular, *Ndoroothi* was a huge meat-eating ceremony for adult men and boys. It was performed in the forest for a week or more. Young boys got a space to share with the elders about the “knowledge of the wild”. On these occasions, education on manliness and men's secrets would be offered for boys and vice versa. It was performed once in a year at the forest and the last *ndoroothi* was held in 1947. During the night the participants sung the *Mariri* dance. On the day of “coming-out” from the forest, *Kibaata* dance was organised in the village arena and a huge number of village mothers came to join in with the best dancers. The elders settled

²⁹ It is saddening to note that following the introduction of exotic fruits by the European missionaries in 1920s, at Mutira mission, indigenous fruits grew wild and were no longer domesticated. In schools, children were made to see the real fruits as only the ones that had been introduced. With the advent of colonialism and Christianity, fruits from Asia and America were introduced and Africa's fruits faded into the savannahs and jungles.

³⁰ Indeed, this is probably the most useful of the imported species. *Mukima* first came to Kenya for the use as a shade tree in coffee and tea plantations. If properly managed, it can be grown in gardens with little negative effect. Although it does not readily coppice, it pollards very well. Farmers in Mutira mission and the rest of central Kenya grow the tree, either in rows along the edge of the fields, or spaced at 10-meter spacing in the fields. As the canopy grows, root competition for water and the crown's increased shade causes reduction of yields. By topping the tree and cutting off all branches at a height of three to four metres when it is five years old, this competition is minimised. The tree re-grows vigorously and in two or three years, the process is repeated, with leaves being used as mulch and branches as firewood. After 20 or so repetitions of this cycle, the 50-year old stem will be of such a size that, cutting it for timber is possible.

³¹ <http://www.eastandard.net/national/nat01042003005.htm>

on the entrance fee for a *ndoroothi*, a few months before the concrete ceremony took place. In particular, a fat male sheep per participant would be given as the entrance fee. Similarly, *Ikaari* dance, which is akin to *ndoroothi* except that it happened shortly after a group of male initiates rolled down their seclusion programme and joined the community, also featured prominently. Significantly, only initiated male adults participated in *Ikaari* dance. Indeed, it was an abomination to end *ndoroothi* or *ikari* on the seventh day. Notably, *Ikaari* was not an annual festival since it took not less than three years to prepare a group of boys for circumcision.³² Certainly, forests played eco-religious roles in the African indigenous society.

Fifth, trees form a critical area in environmental studies in that more attention was given to them in both the missionary era and in the African indigenous society. As Eunice Muthoni Murimi (interview 25.03.13) noted, in the local missionary school (Mutira primary) different species of trees were introduced in the late 1920s. The management set a tree planting day – a trend which is still true today. Alice Wakanugu, born in 1912, concurs with Eunice by explaining that it is not just Rev Herbert Butcher, who served Mutira as the second priest from 1919 to 1927, who encouraged primary school pupils to be reporting to school with small containers of water for watering the newly introduced species of trees, but also Rev Hillard who continued from where Butcher had left off, from mid-1927 to 1928. Further, Priscilla Mbogo (25.03.13) recalled that Butcher, in the late 1920s, used to advise that wherever one intended to build a house, he/she needed to first plant trees around the envisaged compound before starting off with the building project – an inclination that was well observed by the leading elders in the locality. Johana Njumbi, who went on to become the first African clergy in Mutira Mission in 1934, is a good example of a person who upheld this environmental preservation keenly. In an interview, Alice Wakanugu (25.03.13) observed that the completion of the first permanent church building in the 1930s was followed by a massive tree-planting boom around the entire mission. By then, Johana Njumbi had taken over as the first African priest-in-charge of the then Mutira pastorate; though he was just a mere Anglican deacon. Njumbi himself was an environmentalist who, as he liked to say “preached by deeds rather than words” (interview with Beatrice Kagure Kinyua, 25.03.13). As John Kiragu, his nephew, rightly points out, Canon Njumbi only left a third of his farm for crop growing – as he dedicated 66% of his ten-acre farm to tree planting. Wherever he visited any part of Kenya, he would always pick a new variety of tree and subsequently plant it in his own garden. His compound was a kind of a botanical garden. Having learnt from the CMS missionaries who held that 10% of the landmass should be covered by trees, Njumbi strived hard to live up to this ideal.³³

Some concluding remarks

Since environmental concerns have political connotations, it is the reason why traditional methods of nature preservation in the post-missionary era are largely ignored. The committed elders (*aramati*) who used to mobilise people to protect nature are not there at all in the 21st century. Without the *aramati*, the government of President Daniel Moi, in the late 1980s, annexed huge sections of the Mount Kenya forest and inaugurated the Nyayo Tea zone which is still true today. In the neighbouring Karura forest, government plans to lease some of the forest reserves to private developers caused a huge national uproar, as Prof Wangari Maathai led the onslaught against the destruction of nature, where she eventually paid dearly with her own life when the Kenya police descended on her team of the Green Belt Movement, and beat them up. It is no wonder that indigenous fruits such as *ndaathira*, *nganaiyu*, *mbiru*, *ndare*, *metuya*, *nathi*, *nagu*, *ngoombo*, *thigiya*, and *ngambura* have already disappeared in Mutira Mission and its surroundings.

Again, the coming of Christianity in Mutira and its surroundings changed people’s perception about themselves and the environment, resulting in a unification of culture. Consequently, the identity and traditions of the locals have greatly changed. Indeed, the belief system of the indigenous people was more than just a religion. It was spirituality that affected every activity and their way of life – a view that is also observed by John Mbiti (1969). However, this appears to be contrary to the contemporary religious outlook that considers cultural practices, such as veneration of sacred places, trees, mountains, hills and valleys an outdated belief and practice.

For us to redeem the situation there is a need to sensitise and educate our people concerning the value of indigenous resources in conserving nature. In particular, parents should be encouraged to learn traditional practices that show positive human qualities of environmental preservation and thereafter pass them onto children. This poses another challenge, particularly when we acknowledge that the so-called digital (as opposed to analogue) generation has been born in the computer age. This makes their attention and appreciation of indigenous knowledge minimal. In light of this, oral tradition could be repackaged and passed on in the form of motion pictures, music, video cassettes, dance, drama and radio presentations that are appealing to young

³² For details, see Kariuki Thuku and Mumbi Murage, *Eco-socio-cultural profile of the Karima forest*.

³³ In my interviews with John Kiragu Ciria, I gathered that China has already attained the 10% tree cover; for even on top of hills, trees are planted there.

people. In the formal school curriculums, the need to integrate indigenous environmental conservation methods is paramount. In school activities, physical activities that seek to preserve nature should be emphasised at all levels of education.

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