

Advancing Afrikan Indigenous Sustainable Practices for Transformative Development: The Mau Ogiek People, Kenya

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ABSTRACT

Globally, one main concern of the minorities is the right to practice and preserve their culture unconstrained and protect their identity. The Mau Ogiek, are an ethnic minority, forest-dwelling hunters and gatherers who embody Afrikan indigenous sustainable practices in their culture. However, the significance of the practices is not acknowledged in the attainment of the United Nations' Sustainable Development Goals (SDGs) and Kenya's Vision 2030 as well as the BigFour: manufacturing, food security, agriculture and universal health care coverage. This paper unpacks the Mau Ogiek's indigenous sustainable practices to date. An ethnographic study was conducted in the Mau Forest Complex, Nessuit location, with a population of about 2600 Mau Ogiek. Judgement sampling was employed to select 84 consultants. Data collection involved key-consultant in-depth interviews, focus group discussions, observation and artifact analysis. Data analysis used thematic and qualitative content analyses. The ethnic dress' sustainable characteristics include multiple styles and functions, up-cycle, use of natural dyes and locally available materials, not wasteful and hand-me-down in addition to entrepreneurship. Indigenous practices ensure sustainable peace within and without the community through provision of cultural services, borrowing from and trading with neighbouring communities, cultural authentication, fixing beehives in one's territory and equitable resource allocation and consumption. Other indigenous sustainable practices comprise food security, environmental management whereby honey is harvested sustainably and sacredness of trees. Meritocracy and gender equality are highly valued too. Significantly this paper demonstrates that the Mau Ogiek's indigenous sustainable practices advance contemporary design interventions for sustainable development, in fashion production and consumption, environmental management, food security, entrepreneurship, peace and appropriate technology and should be adopted with the community's engagement. Further, it addresses the United Nations' Sustainable Development Goals 1, 2, 8, 9, 12, 13, 15 and 16 and adopts human-centered design approach to provide a better quality of life for all.

Keywords: Afrikan, Dress, Indigenous, Mau Ogiek, sustainable practices,

INTRODUCTION

The Mau Ogiek People

Globally, minority groups' main concern is the right and desire to preserve and practice their culture unconstrained and to protect their identity (International Crisis Group [ICG], 2003). The Mau Ogiek people are an ethnic minority, forest-dwelling hunters and gatherers who inhabit and claim the Mau Forest Complex in Kenya their ancestral land. Ogiek means "caretaker of all" plants

and animals (Ogiek Peoples' Development Programme [OPDP], 2017). Historically the people made their living through hunting wild animals, mainly hyrax and bushbuck, beekeeping, killing various birds and gathering wild edible fruits and herbs in the forests. Beekeeping is their major economic activity. Culturally honey is highly valued for food, traditional brew, medicine, trade, legal compensation and dowry (Kimaiyo, 2004; Ng'ang'a, 2006). The community has faced diverse challenges such as ethnic minority status, evictions from the Mau Forest Complex by the colonial administration and later by successive independent governments and a ban on game hunting by the Kenya government in 1977 (Kimaiyo, 2004). Some ethnic groups use derogatory terms in reference to the people namely *Dorobo* or *Il-Torobo* "a poor person who has no cattle and who therefore lives on the meat of wild animals" (Ng'ang'a, 2006). Despite the discrimination and challenges, the Mau Ogiek uphold, conserve and preserve their culture, both material and non-material culture. The Ogiek cultural centre was opened in June, 2015 at Marioshoni (Correspondent, 2015). The Ogiek peoples' population is 78,691 or 0.20% of the total Kenyan population (Kenya National Bureau of Statistics [KNBS], 2010). Since time immemorial the community adopted indigenous sustainable practices.

Sustainable development is a visionary development paradigm that calls for a convergence between three pillars: economic development, social equity and environmental protection. However, over the past 20 years it has often been compartmentalized as an environmental issue and the reigning orientation of development as purely economic growth, especially by developed countries (United Nations, 2010). Hence, the majority world, Africa included is left to play catch-up with the developed countries. However, diverse communities have developed and employed indigenous sustainable practices in their cultures, be they social, economic or environmental. Adoption of indigenous sustainable practices can play a major role in the attainment of United Nations *Sustainable Development Goals* (SDGs) such as Goal 1, 2, 8, 9, 12, 13, 15 and 16.

Statement of the Problem

The discourse on sustainable practices for the past 20 years has emanated from the developed countries, with no regard to time-tested indigenous methods, found in Afrika and the majority world in general. The indigenous practices, adopted since time immemorial by diverse ethnic groups have sustained their cultures leading to positive social, economic and environmental impacts. However, the indigenous practices especially, Afrikan practices, such as those of the Mau Ogiek remain largely undocumented despite their huge potential in influencing the attainment of diverse UN *SDGs* and Kenya's *Vision 2030* and the *Big Four*.

LITERATURE REVIEW

Sustainable practices in fashion production and consumption

The fashion industry requires a more holistic and systemic thinking approach to sustainable design, one that takes into account not only how fashion is produced, but also its consumption. Sustainable consumption will not be achieved by the work of a single entity, but through collaborative innovation across the value chain and engaging consumers in a redefinition of value (Hutter, Capozucca & Nayyar, 2010).

Generally sustainable/cleaner production is the creation of goods and services using processes and systems that are: safe and healthy for workers, communities, and consumers; and, socially and creatively rewarding for all workers; majorly use locally and regionally created products and services; do not require foreign sources of capital in order to develop and grow; design and create products and services that are durable, repairable, easily bio-degradable and recycled. The products' packaging should use the minimal amount of material and energy possible and; change consumers to customers through education (Sustainable, n.d). Sustainability advocates focus on water and fossil fuel scarcity, such as the cultivation and processing of cotton which consumes large quantities of the two resources in almost direct proportion. Approximately 65kWh of energy is saved for every kilogram of cotton replaced by used clothing (Dissanayake &Sinha, 2012). Additionally, is the use of vegetable tannin instead of chromium for leather processing.

Synonyms for sustainable fashion include eco-fashion, green fashion and slow fashion among others. This paradigm shift has spurred designers globally to investigate alternative materials and to link pleasure and fashion with awareness and responsibility. “[Slow] is simply an approach in which designers, buyers, retailers and consumers are more aware of the impacts of products on workers, communities and ecosystems” and moving away from “quantity to quality” (Craft Alliance, 2012). The prospect of limits on natural fibres and leather are pushing the fashion industry to find alternatives (The New York Times, 2017).

Fashion production is unsustainable, that is, the products and services, production processes, workers and community. In Kenya the manufacture of textile and apparel, and dyeing and leather is categorized as moderate and high energy-intensive respectively (Ecocare International Ltd, 2013). Although most of textile solid waste originates from household sources, waste textiles also arise during textile and apparel manufacture and from the retail industry negatively impacting the environment (Saha, 2014) which calls for the application of 3Rs (reduce, reuse and recycle) in its management. Reuse or recycling discarded fashion items reduces the negative environmental impact significantly (Dissanayake, &Sinha, 2012). Reuse of solid waste such as cut-pieces of fabrics, rejected pants, shirts and t-shirts, zippers, buttons, thread, elastic fasteners, used plastic packets, broken cloth hangers and empty bobbins means converting them into useful materials. Ninety-nine percent of used textiles are recyclable. Recycling entails reprocessing used clothing, fibrous material and clothing scraps from the manufacturing process into a new consumer product, often of lesser quality (Saha, 2014). Fishing nets, carpets and plastics recovered from beaches are also recycled. In support of animal welfare, laboratory-grown bio-fabricated leather, fur, silk and suede have been produced from mushrooms, spiders and fruit waste among other sources (The New York Times, 2017).

Sustainability in fashion production also entails the design and construction of reversible fashion products and textile furnishings; use of end-of-line (EOL) fabrics/materials; up-cycle; restyle/refashion; entrepreneurship and; respect and enhancement of communities related to any stage of the product lifecycle. A reversible textile furnishing is one without true inside out thereby change the interior décor with a single product. Reversible apparel applies the same concept. Reversibility is attained through the use of double faced fabrics, stitching and neatening raw edges and no tags. Majority (82%) of the respondents approved of reversible textile furnishing citing,

they are economically beneficial, ease for usability, rapid change of décor using the single product, creativity, appealing, fashionable and neat finish (Ramsamy-Iranah & Budhai, 2013). When consumers purchase such products they implement *SDG 12* on sustainable consumption, while a designer who creates sustainable products embraces *SDGs 9, 12 and 13* on sustainable production and takes action to combat climate change and its impact.

The EOL fabrics are made of natural fibres such as silk, wool, linen, organic cotton, bamboo, bark and leather, hence bio-degradable. José, a Ugandan fashion designer combines bark cloth with cotton, silk and linen to manufacture fashion products. The designer engages in tree planting with a non-governmental organization in Uganda to sustain bark production (*The Monitor*, 2015), hence conserving the environment. Up-cycling is the process of converting waste material/fabric or useless products into beautiful products of higher quality/value than or the same value as the original one or higher environmental value. By producing up-cycled items designers keep material out of landfills and protect natural resources being harvested unnecessarily for new products (Hipcycycle, n.d). Patchwork and applique techniques conserve the environment. Restyle or refashion entails changing apparel, fashion accessories or soft furnishings from one style to another, instead of discarding it. A pair of jeans trousers converted to a handbag, used curtain refashioned to scatter cushion covers or a gathered skirt restyled into culottes. Sustainable fashion also comprises multi-functional, multi-style and multi-size apparel and accessories as well as products that grow with the end-user. For instance, a scarf that can also be worn a blouse.

Fashion consumption and sustainability are often opposing ideas. The former is a highly resource-intensive and wasteful practice. Sustainability frowns on wasteful consumption. Sustainability in the fashion business is still an emerging agenda and authors such as Young et al., Pears and Fletcher have recognized the importance of investigating how sustainability could be achieved (Dissanayake & Sinha, 2012). Sustainable consumption requires consumers to buy less, use products longer and produce less waste (Armstrong et al., 2016).

Sustainable practices in entrepreneurship and community engagement

In a sustainable enterprise workers are valued and their work is organized to conserve and enhance their efficiency and creativity; their security and well-being is a priority; they are encouraged and helped to continually develop their talents and capacities and; their input to and participation in the decision making process is openly accepted. Communities engaged in any stage of the product lifecycle are respected and enhanced economically, socially, culturally and physically. Continued economic viability does not depend on ever-increasing/unsustainable consumption of materials and energy (Sustainable, n.d). Abuse by Chinese firms of their Kenyan employees in the special economic zones is common, namely 'unfair and restrictive labour practices including low wages, inadequately compensated overtime, sexual harassment, verbal and physical abuse and the violation of the organizational rights of workers' (Fiott, 2010) as well as poor corporate social responsibility.

Moalosi, Popovic and Hickling-Hudson (2007) underscored that designers need to recognize that people are socio-cultural beings and the process of integrating cultural factors in their practice should be emphasized. Design is firmly embedded in users' culture. The use of a society's cultural

factors in design not only makes technologies more appropriate for the social context, but makes better use of culture as a resource for innovation. Artifacts communicate cultural values. Hence, the meanings that products adopt should be constructed in the process of a dialogue between culture, design and users. End-users' interaction with products delivers various benefits at different levels: function, signification, gender, knowledge, aesthetics and mediation (Moalosi et al., 2007). The designers include students, educators and practitioners.

Indigenous sustainable practices

According to Dei (2000) ethnic or indigenous knowledge means knowledge consciousness arising locally and in association with a long-term occupancy of a place. Ethnic also accords a broader identity to local subjects. The author further writes that indigenous knowledge is appropriately discussed within an anti-colonial discursive framework. The approach would recognize the importance of locally produced knowledge emanating from the cultural heritage and histories of peoples, daily human experiences and social interactions. The knowledge is thus personalized, that is, there are no claims of universality. An anti-colonial discursive approach would also point to the relevance of using local languages to create social understandings (Dei, 2000).

Fisher (1987) observes that, African communities have established over time indigenous techniques of preserving their material culture. The people of Zaire and Cameroon stain ivory with a mixture of charcoal, tree sap or pigments from cam wood and oil. The process preserves the ivory, prevents it from cracking and gives it a deep golden brown colour which they prefer.

Indigenous conceptualization of sustainability has the potential to enhance its relevance, yet is excluded from the options of providing possible solutions to emerging pertinent contemporary issues. Mutungi (2016) asserts *okujumbika* (a system of preserving heath and fire for next use) is not only a method of preserving firewood and the environment, but is a means through which families demonstrated care with regard to planning for their needs. Only careless mothers would send their children to fetch fire from neighbours thus expose them to burns. Further, it shows independence, responsibility and sustains peace with neighbours. *Okujumbika* also saves time in collecting firewood because the unused firewood is removed from the fire, rubbed on the ash to extinguish the fire. The one piece left in the fire is covered in a heap of hot ash to deny it oxygen and used next time. The time saved is used in other productive activities. *Okujumbika* protects the women and girls from attacks of wild animals and unfriendly men they may encounter in the forest. *Okujumbika* is used in food preparation and preservation: roast bananas and cassavas; cook food slowly, keep food warm, keep away insects that would contaminate food. Further, it mitigates energy loss. The wood species used in *okujumbika* are those that burn slowly yet produce a lot of heat namely *obugando* (*acacia hockii*) and *omusheeshe* (*Rhus Natalensis*) (Mutungi, 2016).

Traditionally fire was made by use of two sticks rubbed against each other called *okusinga oburindi*. This technique is environmentally sustainable because the two sticks are selected from the naturally dry tree branches hence no destruction of the living plants. There are several uses for the fireplace in the house: cooking, warming people, education space to pass down knowledge through the generations. In addition, the fireplace in *ishaazi* (place for milking cattle) is for chasing away house flies and mosquitoes and other insects. The fire is made from dry cow dung and wet

grass obtained from the cowshed thus produce thick smoke for the purpose (Mutungi, 2016).

Indigenous sustainable practices incorporate appropriate technology (AP) which is both technological innovations and projects. Appropriate technology refers to local people struggling on a daily basis with their needs, understand those needs better than anyone and can therefore suggest or in fact, invent the technological innovations necessary to meet those needs (Troy, n.d). Appropriate technology is also an ideological movement that involves small-scale labour-intensive, energy efficient, environmentally sound, people-centred and locally controlled projects. The approach is a critique to Gross Domestic Product-focused measures of growth and is meant to address four major problems that the latter does not cover; extreme poverty, starvation, unemployment and urban migration. Hence, AP is a sustainable technology, an alternative to technology transfer from developed to developing countries, in that it places both parties on an equal level (Pachamama Alliance, n.d).

RESEARCH METHODOLOGY

Ethnography research design was employed which enabled the researcher to establish what the social actors had to say (Gobo, 2008), that is, the Mau Ogiek about their indigenous sustainable practices, from their perspective and social-cultural context (Mouton, 2001).

The Mau Ogiek claim the Mau Forest Complex as their ancestral home where they practice their culture. The peoples' hunter-gatherer lifestyle made them settle in forests that were adjacent to plains (Kimaiyo, 2004). The forest is divided into 22 blocks, with the Mau Ogiek inhabiting 12 of these namely, Nessuit, Marioshoni, Saino, Sururu, Kiptungo, Sogoo, Nkaroni, Tinet, Sasimwani, Olt pirik, Nkareta and Olmekenyu (Njoroge, 2010).

The Ogiek peoples' population is 78,691 or 0.20% of the total Kenyan population (KNBS, 2010). The accessible population was drawn from the Ogiek living in the Mau Forest Complex, Nessuit location, inhabited by the highest population of the Ogiek peoples, approximately 2600 people. Further, the Mau Ogiek uphold their culture (Lesingo, personal communication, April 11, 2011).

The point of entry to the Mau Ogiek was the OPDP an organization that champions their rights. Judgement sampling (Mouton, 2001) based on member-identified categories (Hammersley & Atkinson, 1995) was used in the selection of key consultants: knowledgeable about their culture and were willing to divulge it. The sample selected comprised two *intaasatutig* 'elderly women', two elderly *poisionig* 'married men', 20 *rwaganig* 'newly circumcised, unmarried males', 20 *mureret* 'initiated, unmarried females', 20 *tyepoosa* 'married *mureret*' and *intaasatutig* of diverse ages and 20 *poisionig* 'married men of diverse ages' totaling to 84 consultants.

A research assistant-cum-translator was identified and recommended by the OPDP as one who was well versed and fluent in Ogiek, English and Kiswahili and lived in Nessuit location. Data collection employed interviewing, observation and artifact analysis, resulting in technique triangulation. Interviewing techniques employed key-consultant in-depth interviews and focus group discussions (FGDs). Four key-consultant in-depth interviews were conducted with two

intaasatutig and two elderly *poisionig* using a semi-structured schedule. Eight FGDs were conducted, each comprising 10 consultants, grouped as, *rwaganig*, *mureret*, combined *tyepoosa* and *intaasatutig* of diverse ages and *poisionig* of various ages. Observation was conducted using photography, because it provides a record that can be analyzed very closely (Flynn & Foster, 2009). The photographs, both posed and unposed show the consultants in their natural settings, wearing their ethnic dress and separately of various cultural artifacts in their homes, in OPDP office and in the Nairobi National Museum collection. Further, the researcher collected and scanned already-existing photographs of the people dressed in their ethnic dress among other items. Any items of the material culture lost over time were sketched.

Artifact analysis (Flynn & Foster, 2009) was conducted on the material culture in their custody, in the Nairobi National Museum and in OPDP office. Only those materials with clearly identifiable dress styles were examined to collect data on the design details and construction techniques. The data obtained from tape recordings of key-consultant in-depth interviews and FGDs were transcribed verbatim and analysed thematically. Qualitative content analysis (Mouton, 2001) was applied on the extant dress and other artifacts and photographs. The data are presented in the form of narratives reported by the researcher, punctuated by corresponding analyses, photographs and sketches.

Consent was sought from the community in writing. The study was thus conducted at the consultants' convenience. The consultants were assured of anonymity and confidentiality, and that the study was strictly for academic purposes.

FINDINGS AND DISCUSSION

Sustainable characteristics of the Mau Ogiek ethnic dress

The indigenous dress incorporates multiple styles and multiple functions; up-cycle; use natural dyes and cosmetics; no wastage; hand-me-down and consumption of locally available materials.

Multiple styles

Leginjus/moloindo 'women's dress/skirt'

Leginjus is women's beaded leather dress/skirt. The dress/skirt must reach below the calves. *Leginjus* is wide at the top and tapers to a curved V-shape at the hem. The term *leginjus* is derived from the V-shape. Previously, it was constructed from bushbuck skin thus red in colour, which was replaced by sheep skin. *Leginjus* is made of three sheep skins which are stitched together on the wrong side with oversewing stitch using *anwet*. The skins are scraped, dried and softened by rubbing animal fat on them using the hands. The dress/skirt is decorated with glass beads. White, blue, red, green and yellow beads are attached in two rows along the edges and all over the garment in diverse patterns. White beads are predominantly used. The dress is fastened on the left hand shoulder, whereby a strap is laced through a loop and knotted. If leather is not available to construct the dress, an *angeet* 'khang' may be worn. Figure 1a and b show dress style of *leginjus*.



Figure 1a: *Leginjus* bodice style sketch

Photo by researcher at Nairobi National Museum
Collection dated 1970



Figure 1b: *Leginjus* bodice style

Leginjus is also worn as a skirt, by wrapping once around and above the waist, right over left. A thin *legetiet* is wound twice around the waist and the skin is folded down to cover it. The skirt must reach below the calves. Figure 1c shows the skirt style of *leginjus*.



Figure 1c: *Leginjus* skirt style

Multiple functions

Oguriet op inderit 'hyrax pelt cloak'

Oguriet op inderit provides warmth to the wearer and a baby carried on the back as well as privacy when a mother is breast-feeding. The cloak is worn by all the members of the community irrespective of gender and age, as it is made to size. *Oguriet op inderit* is approximately 2 ½ m² and made of about 18 hyrax pelts which are stitched together on the wrong side with very close oversewing stitches. The raw skin is pegged on the ground to stretch and dry it. The skin is then cut to size and sewn with the tendons of giant forest hogs. A thin leather strip is attached on the neckline, on to which small glass beads of different colours, red, white, blue and green are fixed. The beads are vertically aligned and are fixed at regular intervals. The sides are turned over to the right side and held in place with large running stitches using *anwet*. For fastening, on one side of the neckline, a leather strap is held in place by a small square piece of leather, and small glass beads are strung together and attached on it. On the opposite side a small square piece of leather is attached and a hole is bored through both materials. Small glass beads are strung together and affixed round the hole. The leather strap is laced through the hole and held by a knot. The *tyepoosa*, *intaasatutig*, *tiet* and *mureret* drape it on the shoulders and fasten it in at the chest, while the *poisionig*, *kecher* and *rwaganig* pass it under the left arm and fasten it on the right hand shoulder. Figure 2a and b show *oguriet op inderit* of 2 1/2m².



Figure 2a: *Oguriet op inderit* of 2 1/2m² sketch

Photo by researcher at Nairobi National Museum
Collection dated 1969

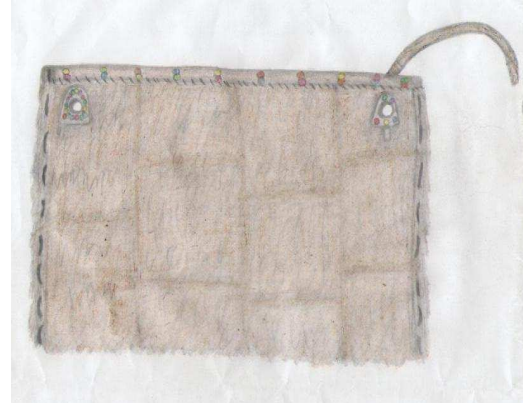


Figure 2b: *Oguriet op inderit* of 2 1/2m²

A larger version of *oguriet op inderit* is made of 33 hyrax pelts sewn together in three rows of 11 pelts each. The length is 48 inches and the width is 81 inches. A leather strip is attached on the neckline on the right side using chain stitch. Four small glass beads arranged in a square and one large one at the centre are attached on the strip at regular intervals. A leather loop is fixed on the right hand side of the neckline and a leather strap is attached on the other end, which is then laced through the loop to fasten it. Figure 2c and d show *oguriet op inderit* of 48 inches by 81 inches.



Figure 2c: *Oguriet op inderit* of 48” by 81” sketch

Photo by researcher in Nessuit location



Figure 2d: *Oguriet op inderit* of 48” by 81”

A baby carried at the back is covered with *oguriet op inderit* that is fastened at the chest. Naiposhi an *intaasat* key-consultant disclosed that when breastfeeding in public, a mother covers the baby with *oguriet op inderit*.

Annuet op chogeet or *annuet rotwetop chok* ‘men’s belt’

Annuet op chogeet is used to secure *menegupet* in place and suspend *chogeet*. The belt is made of scraped *poinet* skin strip. Two holes are made on each end. A thin leather strap is laced through one hole, which is fastened through the opposite hole to tie the belt on the waist. The belt must be laced through a loop in a *chogeet* and tied on the waist. Figure 3 shows *annuet op chogeet*.

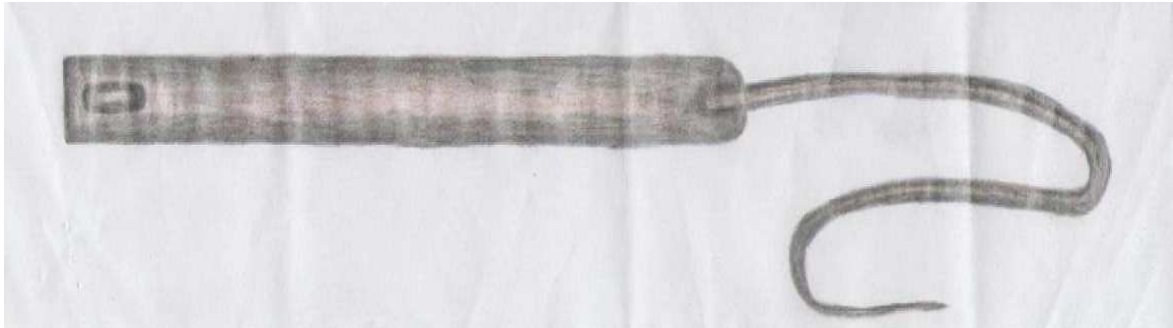


Figure 3: *Annuet op chogeet*

Motoget 'honey bag'

Motoget is mainly used to carry and store harvested as well as for carrying food such as *sirigonig* 'dried meat' in case of food scarcity or when one is on a long journey. The elderly people store their small personal belongings in it. Saimutie a *pyoon* key-consultant disclosed that a *motoget* is also used for carrying an indigenous lighter that is employed in honey harvesting. The bag is constructed from scraped hyrax skin. Hyrax provides light and durable skins, thus the bag is appropriate for long travel. *Motoget*, available in varied sizes is wide at the bottom and tapers at the top. The side seams are joined together with running stitches using sinews, and decorated with whipped running stitches. The fastening is a leather strand attached at the tip of the triangular flap, which is passed toward the back, brought to the front and knotted. A shoulder strap is attached to the top sides. Figure 4a and b show *motoget*.



Figure 4a: *Motoget*
Photo by researcher in OPDP Nakuru



Figure 4b: *Motoget* sketch

Up-cycle

Mwenigg op itig 'women's earrings'

The earrings are called *mwenigg* as they are made from leather. The pair of earrings is suspended on the stretched lower earlobes. The earrings are composed of two long narrow strips of scraped bushbuck skin. The strips are folded into half to create the front and back sides. Glass beads of different colours are attached along the edges of both the front side and back side. Additional beads

in horizontal patterns are fixed on the former. The two earrings are held together by a strand of glass beads attached to the tips which extends to the chest. To don it the earring is opened out, the underside is inserted in the earlobe and the two sides clasp together. The earrings are basically flap earrings. Figure 5a, b and c show *mwenigg op itig*.



Figure 5a: Woman wearing *mwenigg op itig*
Photo by researcher in Nessuit location



Figure 5b: *Mwenigg op itig* front view sketch



Figure 5c: *Mwenigg op itig* back view sketch

Use natural dyes and cosmetics

The *rwaganig* FGDs disclosed that they dye leather cloaks with red ochre.

The *tyepoosa* and *intaasatutig* FGDs reported that the females prepare cosmetics such as *oweyet* 'jelly, produced from animal fat specifically bushbuck, rhino and buffalo' for themselves and their families. During a *goito* 'wedding ceremony' the bride's mother applies *oweyet* on the groom's

forehead to symbolize that he has been given the bride. Further, all the groom's family members irrespective of age are also applied *oweyet* to symbolize that they have been joined to the bride in matrimony.

Tuoreg 'boy-initiates' smear *indurotoit* 'white clay soil paste' all over their bodies to hide their identity. *Indurotoit* thus identifies the setting as *tumdo op werik* '. Figure 6 shows application of *indurotoit*.

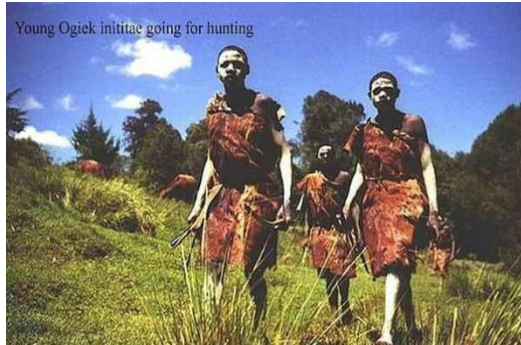


Figure 6: Boy-initiates smeared with *indurotoit*
Photo from OPDP website

No wastage

All the parts of a slaughtered animal are used to construct diverse articles of dress.

Rosiet 'headdress'

Rosiet is a general term for various styles of hats or headgear. The headdresses are made from different materials such as hyrax pelt, cow's innards and cardboard. Children wear undecorated, cone-shaped hyrax pelt hats. The hat is made to fit the wearer's head. Figure 7a and b show children's *rosiet*.



Figure 7a: Children in *rosiet*
Photo courtesy of OPDP Nakuru



Figure 7b: *Rosiet* for children

Men's hats are made of cow's innards. In construction the innard is cleaned, dressed onto the underside of a medium size clay pot and allowed to dry thus, taking its circular shape which fits

the head. Men's headgear is also made from hyrax or colobus monkey or baboon pelts and it resembles a wig. Figure 7c shows men's *rosiet*.



Figure 7c: *Rosiet* for men

Hand-me-down

Taet 'brass bracelet/necklace'

The brass bracelet is worn on the right hand. A son may also inherit a *taet* 'brass bracelet' from the father. The finding concurs with Ademuleya (2011) who found out that as *aso-oke* can be inherited. Naiposhi further disclosed that no article of the Mau Ogiek's indigenous dress is ever thrown away, an economic value. If one outgrows a bracelet, a new one is constructed and worn, and the old one is kept away for future use. Figure 8a and b show *taet* 'brass bracelet'.



Figure 8a: *Taet* 'bracelet'

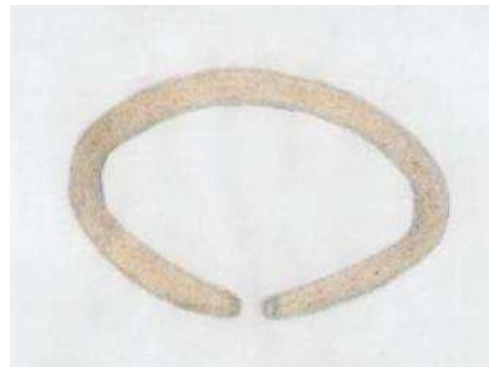


Figure 8b: *Taet* 'bracelet' sketch

Use locally available materials

Pirir orog 'necklace'

Pirir orog is made by stringing together small red pieces of wood which are cut from the stem of a tree called *pirir*. The necklace is donned on new born babies. Figure 9 shows *pirir orog*.



Figure 9: *Pirir orog Nguloleit* 'disc'

Nguloleit is a round wooden disc cut from a tree called *iguloleisieg*. The disc is made in diverse sizes and worn on the pierced lower earlobes to enlarge and stretch the holes. Figure 10a and b show *nguloleit* and *gempirr itig* 'ear piercing'.



Figure 10a: *Nguloleit*



Figure 10 b: *Gempirr itig*

Gesenta 'baby carrier'

Gesenta is constructed from scraped and softened bushbuck skin so as to provide comfort to the baby. The carrier is fastened at the waist and on the left shoulder by passing leather straps through loops and knotting them. Figure 11 shows *gesenta*.



Figure 11a: Baby being carried in *gesenta*
Daily Nation January 12, 2016

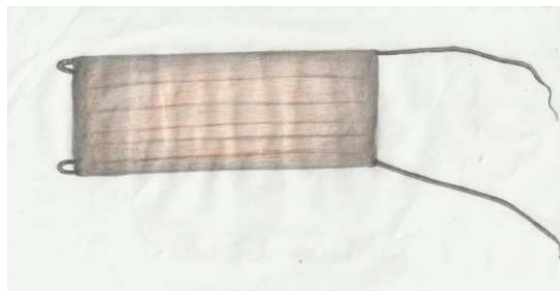


Figure 11b: *Gesenta* sketch

Entrepreneurship and community engagement

The *tyepoosa* and *intaasatutig* FGDs reported that the people can construct any item of their ethnic dress on order for sale. Thus, the dress takes a commercial aspect. Midwifery is carried out by *tyemosianisieg*, an elderly woman and is highly remunerated. The remuneration conforms to a sustainable enterprise where workers are valued among other commitments (Sustainable, n.d). The community asks for payment to provide information about their culture, such as dress. The Mau Ogiek exhibit their material culture, which includes their ethnic dress at the various Agricultural Society of Kenya shows. Further, they welcome anyone who wishes to study their ethnic dress to their habitat. The studies add to the body of knowledge on culture. The Ogiek Cultural Centre in Mariosioni, Molo Constituency was officially opened in June 2015 (Correspondent, 2015). Through the cultural centre fashion designers may work closely with the community to incorporate the Mau Ogiek's ethnic dress in their collections, for instance, the *motoget* and *mwenigg op itig* among others thereby preserving the culture. Hence, as Moalosi et al. (2007) assert that designers become creators of cultural experiences that enrich fundamental human experiences of being alive. The effort supports *SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation*.

Sustainable peaceful co-existence

To sustain peace within and without the community the Mau Ogiek offer cultural service to and trade with neighbouring communities, borrow from other cultures, engage in cultural authentication, fix beehives in one's territory and ensure equitable resource allocation and consumption.

Offer cultural service

Saimutie, an elderly *poyoon* key-consultant reported that the Mau Ogiek's circumcisers are sometimes called upon to circumcise young Maasai boys for pay. The payment is in the form of sheep whose skin is used to fabricate their indigenous dress.

Borrow from other cultures

The Mau Ogiek borrowed artifacts from the Kipsigis *gelteet* and *chepkuleit* 'headdress' and *rungut op metit* 'club'. Borrowing clearly indicates appreciation of another community's culture.

Gelteet and chepkuleit

Gelteet and *chepkuleit* was worn by girl-initiates to the night dance on the eve of FGM. *Gelteet* is made of cardboard that is shaped as two pairs of elephant tusks turned on each other. Other styles include bird figures. *Gelteet* is worn on the face, secured by a strip of bicycle tube and a bicycle light bulb, contemporary shiny garlands and small plastic lids of various colours are fixed on it. Figure 12d, e and f show different styles of *gelteet*.



Figure 12d: *Gelteet* style (A)
Photo by researcher in OPDP Nakuru

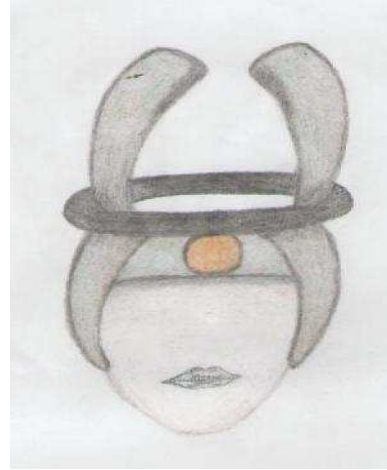


Figure 12e: *Gelteet* style (A) sketch



Figure 12f: *Gelteet* style (B)
Photo by researcher in Nessuit location

Chepkuleit is a rectangular two-piece fabric hat which is worn underneath a *gelteet*. One side may be yellow and the other white. Black or any colour of fabric strips are attached on the front side in an X-pattern, in addition to shiny garlands. Knitting yarns are plaited leaving loose threads at the tip. The yarn is then attached at one tip of the hat. The hat is stiffened, supported and made firm on the inside by two sticks held in an X-pattern. Figure 12g shows *chepkuleit*.

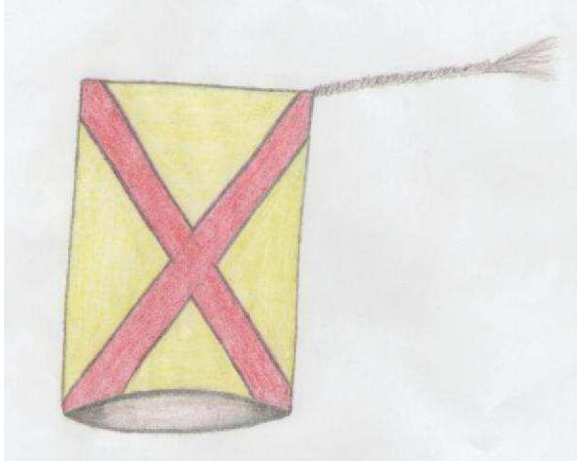


Figure 12g: *Chepkuleit*

Rungut op metit 'club'

The Kipsigis introduced *rungut op metit* to the Mau Ogiek during joint initiation of boys. The club is mainly constructed from *mūtamaiyũ* tree, in addition to *mũnderitũ* and *mũcharagĩ* trees. There are two types, for the *rwaganig* and *girwogindet*. For the former, the tip is round, thus the term *metit* 'head', bent downward and it is cut in one with the handle. Figure 13a and b show *rungut op metit* for the *rwaganig*.



Figure 13a: *Rungut op metit* for *rwaganig*
Photo by researcher at Nairobi National Museum
Collection dated 1970



Figure 13b: *Rungut op metit* sketch

The *girwogindet*'s club also has a round tip cut in one with the handle and incisions are made on the handle. Figure 13c shows *mukwanjit* for a *girwogindet*.



Figure 13c: *Rungut op metit forgirwogindet*

Cultural Authentication

The *rwaganig* FGDs disclosed that the Mau Ogiek boys may join the Kipsigis' boys for initiation, and they follow the rituals of the latter. Thus, the Kipsigis' walking stick has been culturally authenticated by the Mau Ogiek and named *mukwanjit*. *Mukwanjit* is obtained from a young tree branch which is bent at one tip, left to dry and acquires the curved shape of a walking stick. Figure 14a and b show different styles of *mukwanjit*.



Figure 14a: *Mukwanjit* style (A)

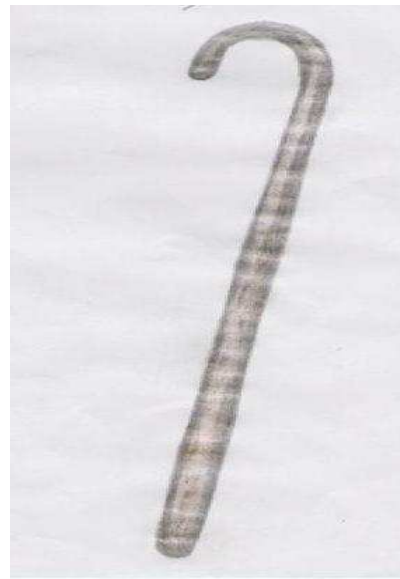


Figure 14b: *Mukwanjit* style (B)

The Maasai *shuka* is given to the *rwaganig* during their graduation ceremony. The *rwaganig* fasten it as they do *oguriet op inderit*, that is, under the left underarm and on the right shoulder.

Fix beehives in one's territory

Each male member of a household fixes *mweingonig* 'beehives' in the *gap* 'clan' territory to which one belongs. *Mweingonig* are the people's "cattle" or wealth which are exclusively constructed and owned by the men. Indigenous *mweingonig* are constructed specifically from mature *septet*, thus they are red in colour. The key-consultants reported that for a *rwaganto* to be eligible for marriage, one must have a minimum of ten *mweingonig*. The requirement assures the community that he can feed his family. However, some *rwaganig* are lazy thus they

take a long time to acquire the requisite *mweingonig*, hence they delay in marrying.

Equitable resource allocation and consumption

Kiplangat (2009), states that the forest is divided into *gap* and each has exclusive rights over it. Land rights include rights to hunting grounds, to fix beehives and to collect honey and natural materials, such as trees and bark for manufacturing of ethnic dress. The forest is further sub-divided for family units. The men only hunted in their own clan's territory. The rules were so strict that in the event of an animal such as *poinet* being hunted ran into another clan's territory the hunters were not allowed to pursue it farther. Instead, they reported the matter to the concerned clan, and it tracked it down and handed it over to the hunters. The rules ensured equitable resource allocation and use, for instance, the availability of animal skins to construct the dress, and to prevent clan conflicts.

Trade with neighbouring communities

The interaction of the Mau Ogiek with the neighbouring communities through trade brought about sustainable peaceful co-existence. Serere an *intaasat* key-consultant reported that they engaged in barter trade whereby the Mau Ogiek women exchanged among other items *teret op menet*, *teret op gomek* and serving spoons which are used to scoop honey from containers for *angeet* and cotton fabric with the early Christians. The Mau Ogiek sold to Kikuyu community *teret op menet* and obtained *segereg* 'cowries' used in embellishing *oguriet op saamput* and constructing *segeriet* 'cowries bracelet', adorn *oguriet op saamput* and pendants.

The *poisionig* FGDs reported that the people also engaged in barter trade with the Maasai, where *gomek* was exchanged for sheep, red ochre, metal, brass, glass beads, milk and tobacco. The sheep skin was used to make *leginjus*. Brass is used to fashion *ilmintoisieg* 'men's earrings'. Glass beads of diverse colours are used to fabricate and embellish *kauya* 'leather skirt', *mwenigg op itig*, *ingongonoit* 'headband cum necklace', *ingarepait* 'brides' necklace', *ingotiot* 'flywhisk', *leginjus* and pendants. In addition, the community exchanged ivory and black monkey skin for a calf. The calf was consumed and provided skin for constructing *menegupet* 'men's vest'. Further, *oguriet op saamput* 'baboon pelt cloak' was exchanged for oxen, as the Mau Ogiek never reared these. Rather, they ate them and used the skin to construct *kweog* 'men's sandals' and *legetiet* 'women's leather belt' and men's *rosiet* from cows' innards. Previously, *kweog* and *legetiet* were made of bushbuck skin, while *rosiet* were constructed from hyrax and bushbuck pelts. Later however, they adopted livestock rearing, which influenced the dress in diverse ways. The results concur with Mann (2011) who established that Europe engaged in a highly lucrative trade with Africa, exchanging glass beads for such items as ivory, gold and incense. Many of these trade beads became part of costume and adornment among Africans. Dark pink Venetian glass beads dating back to 1830 found their way to the Samburu, while blue annular beads are still worn by Borana elders. SDG 16: Promote peaceful and inclusive societies for sustainable development. Figure 15, 16, 17, 18, 19a and b and 20 show different styles of



Figure 15: *Ilmintoisieg*

Figure 16: *Ingarepait*

Figure 17: Woman holding *ngotiot* Photo by researcher in Nessuit location



Figure 18: Man wearing *menegupet* and *oguriet op inderit*
Photo courtesy of Simon of Nessuit location, taken in 1957

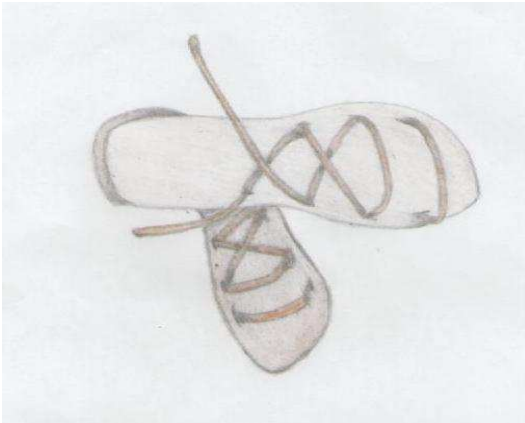


Figure 19a: *Kweog* style (A)

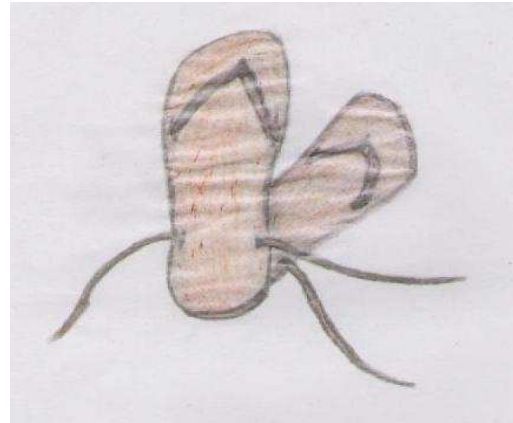


Figure 19b: *Kweog* style (B)

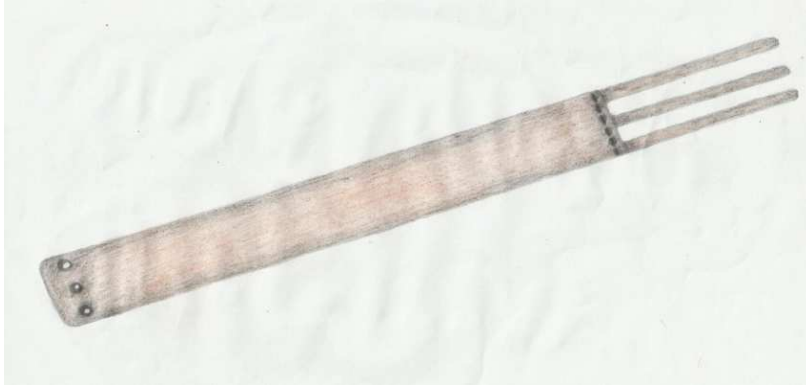


Figure 20: *Legetiet*

Food security

Owning many beehives and storing honey ensures a family's and neighbours' food security they were very concerned about each other's welfare. The men also fabricate *gisungut* 'storage container for honey'. The stored *gomek* is only used when they fail to get any in the forest, for instance, in times of heavy rain, or when it is not the season for honey. The *tyepoosa* and *intaasatutig* FGDs disclosed that the women collect edible wild fruits, fetch water and firewood, cook, and raise the children. The women construct *lekwelet* 'storage container for dried meat' which ensures a family's food security, as *sirigonig* 'dried meat' never rots and is only consumed when the men fail to get any game meat in their hunting expedition. The indigenous sustainable practices conform to *SDG2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture*.

Environmental management

Harvest honey sustainably

Honey harvesting is done seasonally thus sustainable. The *rwaganig* and *poisionig* FGDs reported that some movements by the Mau Ogiek were for socio-economic reasons. In the olden days, movement was seasonal in search of flowers that attracted bees and the bees producing honey in return which was harvested by honey harvesters donned in prescribed dress. In the lower area of Nakuru, flowers blossomed faster and there was plenty of food compared to the higher ground of Mau Forest Complex. The flowers first blossomed in the lower region.

Sacred trees

Kiplangat (2009) asserts that the forest provides spiritual sites, sacred trees and *peeg op tegeldit* 'pure fresh water'. Trees were so sacred to the community that they could not be felled at random. If one needed a tree, he/she was required to seek permission from the elders with a very valid reason. Felling a tree without permission was thus an abomination to the community. Unless one is cleansed through some rituals performed by the elders wearing specific ethnic dress, then the culprit stands a high chance of "falling" (dying) or sickness or being bound to live a very miserable life. The violation may also occasion famine and drought to the community. Rites of passage are performed in the forest namely *tumdo op werik* 'boys' initiation ceremony' in which the *torusieg*

'initiates' and *mutiriot* 'teacher' must don the prescribed dress. The finding supports Maathai (2006) assertion that the Kikuyu community's cultural and spiritual reverence for the *mugumo* 'fig tree' contributed to the conservation of biodiversity. The Gikuyu prayed under a holy *mugumo*. Maathai decries the destruction of the natural ecosystem by the traders and administrators during the colonial period who replaced indigenous tree species with exotic ones and engaged in commercial agriculture. Over the decades rivers and streams either dried up or were greatly reduced. The results also ensure attainment of *SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystem, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss.*

Meritocracy

Meritocracy was observed in political organization whereby Saimutie a *pooyon* key-consultant disclosed that before colonialism, the Mau Ogiek had diffused authority, devoid of centralized authority which normally has such roles as those of chiefs or formal council of elders. The finding is similar to that of Olaoba (2005) and Edo (2005) who state that indigenous political systems in Africa are societies with diffused political leadership, as the peoples were preoccupied with hunting, food gathering or animal husbandry. For instance, the Logoli, Igbo, Tallensi and Nusr people of Nigeria. The *rwaganig* FGDs reported that when community matters arose, such as family or *gap* conflicts needed to be resolved, a *girwogindet* 'indigenous volunteer leader' assisted by other elders would undertake the task. The *girwogindet* wore special dress for identity. One qualified to be a *girwogindet* if he was brave and an expert hunter: qualities reflected by having killed fierce animals such as a buffalo. The *girwogindet* had married off his daughters, initiated almost all his children and was left at home with his wife. Further, one must possess many *mweingonig* as people went to him for help and naturally he provided assistance. The results agree with Edo (2005) who established that power was vested in people of virtuous and proven integrity as well as titled men. In addition, personal attainment in wealth, war, physical or magical power won the respect of others.

The *tyepoosa* and *intaasatutig* FGDs revealed that during the colonial era, the position of a headman was created among the people. The headman linked the community and the government. A male member of the community volunteered his service, but he had to be vetted and accepted by the community. The colonialists were obliged to accept the group's choice. The council of elders, composed of both men and women, is a recent phenomenon, which came about due to the establishment of the Mau Forest Complex taskforce in 2009. The members do not have any prescribed ethnic dress. To qualify to join the council one has to be old, respected by the community, a community mobilizer and to have raised one's children well according to the community's values. The council is tasked with matters of land, especially on evictions from and excision of the Mau Forest Complex by the government, and to settle *gap* and family disputes. The councils composition helps attain *SDG 5: Achieve gender equality and empower all women and girls.* The community is also governed by the national government officers- chief and sub-chief, who perform administrative duties. Given their ethnic minority status, the community has been unable to elect one of their own to politics. Consequently, their cultural rights are not effectively championed.

The *rwaganig* and *poisionig*

FGDs reported that the community's security is provided by the *rwaganig* as the community faces attacks mainly from the Laikipia and Maasai. The *rwaganig* also provide security from wild animals and have to don prescribed dress. The result concurs with that of Edo (2005) who established that age-grades were empowered by the community to carry out seemingly difficult tasks in warfare, public work and other social callings.

Gender equality

Mutarakwa and Serere respectively elderly *poyoona* and *intaasat* reported that the existence of cultural experts played a great role in the dress. These experts are very knowledgeable on the group's cultural issues, both material and non-material culture. The elderly women and men and other members of the community with a high level of ethnic identity, were called upon to either instruct on the construction of dress or fabricate it. The dress had to be made according to the non-material culture tenets, such as normative order for dress and clothing customs. Hence, the community implements *SDG 5*.

The men were responsible for the organization of diverse cultural occasions and their accompanying ethnic dress. The boys' and girls' rites of passage were strongly upheld in their totality and accompanying dress. The community, however, was gender sensitive hence it included women in decision making to some extent. The women, therefore, had a say in the matters concerning the indigenous dress. Gender integration occurs in the construction of *morogit* 'quiver' which is done by both elderly *poisionig* and *intaasatutig*. The findings concur with Ng'ang'a (2006) who established that the male elders with advice from their wives made decisions on community matters, such as the next move in search of raw materials for dress. In essence, the Mau Ogiek implements *SDG 5*.

Appropriate technology

Metal obtained through barter trade with the Maasai was used for constructing tools for fabricating dress, such as *gisienjot* 'indigenous chisel' and *ayuet op kusiet* 'hide scraper'. The former is used to fabricate *nguloleit* and *rungut op metit* and the latter to makes hides and skins soft and pliable. Figure 21a and 1b illustrate respectively *gisienjot* and *ayuet op kusiet*.



Figure 21a: *Gisienjot* and *gungit*.
Photo by researcher in Nessuit location
Collection dated 1969



Figure 21b: *Ayuet op kusiet*
Photo by researcher at Nairobi National Museum

The *poisionig* FGDs also reported that other tools include *impiniit* ‘indigenous awl’ which is employed for patching together pieces of animal skin to construct *oguriet op inderit* and *chogeet* and to attach embellishment for instance, beads on *mwenigg op itig* and *segereg* on *oguriet op saamput*. Indigenous *rotwet* ‘knives’ were constructed and used to cut the animal skins into the required pieces and yarns. *Mecheita* ‘thin metal rod with a wooden handle’ is used for boring holes in wood in the construction of *pirir orog*, *ingerut* ‘arrow’ and *tenget* ‘spear’. The finding concurs with Troy (n.d) that appropriate technology refers to local people struggling on a daily basis with their needs, understand those needs better than anyone and invent the technological innovations necessary to meet those needs.

CONCLUSION

The Mau Ogiek have employed indigenous sustainable practices since time immemorial. Based on the findings, it is clear that Afrikan indigenous sustainable practices have a profound role to play in achieving the *SDGs* and in Kenya’s context the national development visions and policies particularly in sustainable fashion design; entrepreneurship and community engagement; sustainable peaceful co-existence; food security; environment management; meritocracy; gender equality and appropriate technology. These practices if adopted with the communities’ engagement shall lead to Afrika’s transformative development and sustainable livelihoods, as well as decolonizing Afrikans while complementing existing globalization.

RECOMMENDATIONS

Based on the discussion this paper recommends,

Higher education institutions (HEIs) to incorporate Afrikan indigenous sustainable practices in academic programmes to foster deeper understanding, exploration and application in the contemporary setting while providing appropriate solutions to emerging issues. The solutions could be innovative products and services consciously inspired by the users' socio-cultural practices.

Recognition and engagement of indigenous communities in the adoption and application of their sustainable practices to include their knowledge, perception, beliefs and attitudes among other in order to achieve transformative development and sustainable livelihoods.

Although this study has provided a scan of indigenous sustainable practices of the Mau Ogiek, more research needs to be conducted to uncover other sustainable strategies and possible implementation routes to achieving glocalization.

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