

Influence of Ogiek's Indigenous apprenticeship education of herbal medicine and cosmological related belief systems on sustainable environmental conservation of Mau Forest, Kenya

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Abstract

Traditionally, the Ogiek are hunter-gatherers and have distinctive histories of interaction with the natural environment. Over the years, the Ogiek have inhabited in the Mau Forest with little impact on the environment.

This paper critically examines the influence of Ogiek's apprenticeship Scheme of herbal medicine and related cosmological belief systems and practices on sustainable environmental conservation of Mau Forest, Kenya.

The study was informed by the General Systems Theory and the Cultural Ecology Theory. An ethno-historical approach was employed in the design, instrumentation, data collection, analysis and interpretation. The paper reveals that herbal medicine as practised by the Pre-colonial Ogiek society facilitated the conservation of Mau Forest ecosystem for their sustainable livelihood. Similarly, basing an understanding on the cosmological belief systems and practices, it was revealed that it was the sacredness of the natural environment that became

a strong strategy in conserving Mau Forest ecosystem. Moreover, the omnipresence of God was cherished as the caretaker of the Mau Forest. Therefore, there was a strong moral conviction that the loss of Mau Forest and its biodiversity was a loss of the Ogiek heritage. It is hoped that the research findings will be useful to policy makers in such fields as education, medical Anthropology and environmental conservation on the need for the integration of indigenous knowledge systems into modern environmental management strategies.

Introduction

Hunting and gathering peoples of Africa represented an environmental adjustment that is found in isolated areas of low population density (Ottenberg, 1960). This was a true assertion of the Ogiek of Mau Forest in Kenya who has heavily relied on the simplest technologies, usually owning no more material goods than they could carry on their own as they engaged in migratory search for food. They are directly dependent upon wild plants and

animals for their survival.

The Ogiek, also referred to as the Dorobo, form a minority group among the Kalenjin. They constitute an underlying sub-stratum for the Kalenjin and the Maasai people and perhaps the Kikuyu according to Muriuki (1976), Kipkorir and Welbourn (1973). The Ogiek are one of the earliest known inhabitants of East Africa. They are presently among the few survivors of the early inhabitants of East Africa. Unfortunately, they are facing extinction as they are being assimilated by other communities (Sutton, 1976 and Towett, 2004).

The Ogiek lived in small isolated settlements inside the dense, high-altitude evergreen forest, their permanent home and wet-weather hunting ground. According to Kratz (1986), the forest has been mentioned as the place the Ogiek regarded as their domain, contrasting sharply with their neighbours spatial understandings. Hence, closely related to the space itself was the way in which the Ogiek made their life in it, by hunting, gathering and

practice of herbal medicine.

In Kenya, about 80% of the local population meets their Primary Health Care (PHC) needs through herbal medicine (FAO, 2004). However, in rural areas where about 20% of the medical services were realized, people were treated largely by use of traditional medicines. Similarly, in Kenya, study of indigenous knowledge on uses and conservation of useful indigenous herbs and plants as intensified among scientists at Kenya Forestry Research Institute (KEFRI), National Museums of Kenya (NMK), Kenya Medical Research Institute (KEMRI) and the School of Medicine of University of Nairobi especially the Pharmacy Department and Kenyatta University School of Health Sciences have been focusing on traditional medicinal plants, commonly referred to as alternative medicine.

While, ICIPE which deals with insect ecology has been actively involved in research on plant pests and insecticides including plants based on chemicals such as NEEM (IGAD, 2001). Herbal medicine was widely practised by the

Ogiek as early as pre-colonial times. Ogiek used a variety of treatments for health problems, which had physical and social causes alike. They had substantial knowledge of herbal medicine made from forest plants and trees and also consulted a range of traditional healers (Kratz 1995:126). Infact, many patients who had health problems were cured through the mixing and administering of herbal medicines as that constituted a high proportion of Ogiek healer's work. Girls were taught how to apply traditional medicine on the patients as first aids for the treatment of ailments and common complaints (Birir, 2006).

It would be imperative to note in this paper that as contextualized from the traditional African worldview perspective, environmental resources (land, water, animals and plants) were not just production factors with economic significance but also had their place within the sanctity of nature (Millar, 2004; UNEP, 2007). Among the Ogiek, certain places had special spiritual significance and were used as

locations for rituals and sacrifices such as sacred grooves, shrines, mountains and rivers. These locations were quite often patches of high biodiversity which were well conserved and protected by the community. They acquired special values and became objects of reverence as well as worship among the indigenous Ogiek society because of their roles in the fulfilment of man's bodily needs.

Methodology

The subject of inquiry was based on the assumption that individuals construct social reality in the form of meanings and interpretations and that the reconstructions tend to be transitory and situational (Cohen, 1994; Gall, 2003). This was the study of a people's representations of their history and hence linked to the study of their oral tradition. Therefore, a relevant research design for this study was an ethno-historical design that systematically and objectively locates, evaluate and synthesise the evidence in order to establish facts and draw conclusions concerning the past events. The study

sought to investigate the socio-cultural aspects of indigenous education of the Mau Ogiek that have been able to engender sustained environmental management of Mau Forest.

An ethno-historical design typically combined two research strategies, the emic (local viewpoint) and the *etic* (scientist-oriented) approach.

The research sample was drawn from seven sites in Mau Highlands: Teret, Sururu, Nessuit, Mariashoni, Bararget, Tinet and Kiptororo. Using the snowball and purposive sampling techniques, the researcher identified forty five elderly Ogiek individuals who provided useful information on specific knowledge that this study sought to investigate (Babbie, 1986 and Gall, 2003). These people were then used as informants to identify others who qualified for inclusion in the study and these, in turn, identified yet others, hence the number kept on snowballing (Dalen, 1979; Cohen, 1994; Gall, 2003). Some of the informants were identified from the Kenya National Archives (KNA) in Nairobi while undertaking collection

of archival sources. The others were mentioned in the course of the fieldwork. The main instruments that were used to collect the data were an observation schedule and interview schedules. The researcher administered observation and interview schedules for each of the targeted groups; the council of elders, herbalists, sponsors, religious leaders as well as early converts, colonial chiefs and government officials. The items in the instruments were designed in such a way that they were relevant to each of the group of informants mentioned above and were ultimately useful in achieving the research objectives outlined in this study. Data collection approaches included the use of field observations, oral interviews and documentary (primary and secondary) sources. Oral interviews, observations and documentary sources were the main sources for data collection in this study. The data was collected by interviewing individuals, observing events as well as analyzing documentary (primary and secondary) sources.

The critical undertaking in analyzing

qualitative research was for the researcher to manage and organize the data. The researcher constructed patterns that emerged from the data and tried to get meaning out of them. Starting with a large set of issues and data, the researcher progressively narrowed them into small and important groups of the key data as acknowledged by earlier scholars and based on the research objectives (Dey, 1993; Bogdan, 1998; Krathwohl, 1998; Kottak, 2002; Gall, 2003). Following Patton's (1990) and Gay & Airasian's (2003) approaches to data and content analysis, the investigator undertook a multistage process of organizing, categorizing, synthesizing, and interpreting the data. Each of these processes were found to be iterative as the researcher cycled through these stages more than once in a continual effort to narrow and get meaning of the emerging themes and categories that formed the organizing frame work in this study. Indeed, Gay and Airasian (2003:229) identify four steps in analyzing qualitative research data, which were ultimately utilized in this study, namely: reading or memoing,

describing, classifying and interpreting.

Results and discussion

The paper critically discusses the influence of Ogiek's indigenous apprenticeship education of herbal medicine and related cosmological belief systems on sustainable environmental conservation of Mau Forest in Kenya. The purpose was organized around three major aspects based on the superstructural systems, theories and institutions among the Ogiek.

Philosophy of administration of herbal medicine as ecological learning strategies

The first aid involved the fetching of different types of curative leaves, roots or even juices of particular trees (Ronoh, 2000; Maina, 2006). Men and women learnt this skill from their parents. Parents also passed over the knowledge of herbal medicine to their children who had special interest to learn the art. Some families acquired widespread reputations as successful healers and diviners. Within the Ogiek

community, the elders encouraged all the members to learn the basic elements of herbal medicine in the application of simple ailments. The trainees were taken through, not only to memorize the vast syllabus of oral literature, their curriculum but also to include the entire range of medical knowledge accumulated and transmitted from generation to generation. They had to learn to recognize diseases, both physical and mental and more so as to have knowledge on identifying and diagnosing symptoms in early stages by defining the probable cause of a particular illness.

Fundamentally, the trainees were taught on how to discern the leaves, berries, and roots of a greater number of local plants. In order to adequately acquire such knowledge, the youths and relieved patients were sent to gather specific herbs and ultimately taught the recipes for preparing a variety of medicines. As already discussed in the foregoing analysis, it would be imperative to note that acquisition of such skills and techniques were generally passed

on from father to son especially from those clans that took herbal medicine as their profession. However, the same arrangement was far from rigid.

For instance, a son who had no natural bent for his father's inclination to herbal knowledge, may take up hunting or bee keeping as a full-time or learn another trade from a member of his father's or his mother's family or even from non-relative as was acknowledged through their traditional framework. In that way, each individual was expected to fulfil and predetermined his destiny. Such conceptual ideology and reality as articulated by the proponents of General Systems theory greatly influenced the educational theory and practice of the Ogiek society. Therefore, every Ogiek was considered to be a herbalist to a greater or lesser extent (Toweit, 1979:40-41). However, *Chepkerichok*, were recognized and trained herbalists who practised the art of herbal medicine among the Ogiek and they came from specific clans (Kimisoi, 2006).

Gathering the curative wild fruits, berries, roots and herbal barks for medicine was

the task of Ogiek women and children. Women herbalists transmitted their knowledge of herbal medicine to the next generation. Collecting of herbs (*Kebut Kerichek en Osinet*) for curative purposes were guided by rules and regulations where all the herbalists were expected to adhere to. Such rules also included guidelines on the administration and treatment of the patients among the Ogiek community. On the onset, the council of elders of various *Konoituek* had maintained an oral register (not written) of all professional and experienced herbalists. It was on the basis of an oral record that they only allowed such people to access the forest to collect herbs for use to treat the patients. However, in very rare occasions, these herbalists took with them the trainees to the forest to assist them to gather herbs, including being taken through an educative process of acquiring skills and knowledge on the art of herbal medicine.

More precisely, through several years of learning, practising and experience, the herbalists were able to memorize

the exact location or position of each and every important curative herbs in the forest. With the stream of time, they were able to transmit such knowledge and skills to their children and youth who occasionally accompany them to the forest to learn how to collect these herbs. As diametrically opposed to other apprenticeship schemes, the trainees learnt the art of herbal medicine through participant observation as they were being prepared to be fully potential herbalists, thus determining the destiny of the community. In the same contention, children and youth were inducted knowledge of skilful gathering of herbs without destroying the entire tree, especially with regard to removal of roots, leaves, stems and barks. They were also warned to be extra cautious on handling of harmful poisonous and dangerous herbs such as *mocheket*, *tagaratu*, *Chesitoruet* and cactus leaves, which in turn would be mixed with other ingredients to make useful herbal medicine to cure numerous diseases.

Based on the philosophy of the concept

of tomorrow and aware on the need for environmental conservation, herbalists were able to stock ready-made herbs for use lasting over a long period of time so as to allow for regeneration of those affected plants to heal. In the same likeness, most of the herbal medicinal trees were treated as sacred and therefore the society was not to tamper with them. Because of the importance attached to these herbal trees, the herbalists did assist the lineage council of elder's tribunal to check and monitor the growth and development of such trees as it greatly determined the destiny of the community. To acknowledge the significance of these trees, many informants and cultural consultants agreed that the punishment meted on offenders who destroyed these special tree species were more punitive than those who were found to have tampered with ordinary trees. For instance, a part from the general guidelines on compensation thereof, the offender was instructed to plant more of the same herbs within the homesteads of recognized herbalists.

Training and restocking of new herbs for sustainable environmental conservation

In most cases, renowned herbalists were found to have tendered their own bushy and miniature forests of herbal plants within their various *konoituek* hence assisted in conservation of the natural resources. These museum gardens enriched the growth and development of herbal plants and in turn acted as an educational centre, where herbalists trained their clients (children and relieved patients) to identify different types of herbal trees and their usage in the treatment of various illnesses. These gardens became the pharmacies and laboratories where the trainees gained enormous knowledge, skills and techniques in the area of herbal medicine. The Ogiek boasted of the forest itself as a school, where nature could teach the trainees many things through observation. Therefore, the wisdom to understand nature and live on it in a sustainable way was a heritage passed down by the herbalists to the young members of the Ogiek society. For

adequate and regular management and maintenance of these garden museums, herbalists utilized their relieved patients (who may not have been able to pay in kind towards their treatment) to further equipped and tendered the gardens by collecting more herbal plants and seedlings from the forest to plant them within those domesticated gardens in their homestead.

However, in the same light, there were also strong medicines that their administration and prescriptions required the patients to be closely monitored by the professional herbalist especially on their dosage, treatment and ultimate response. Those patients who were subjected to that mode of treatment included those with psychiatric cases. Because of their prolonged period at the *orbul*, such relieved patients were trained to administer medicine to their sick colleagues. They were also sent out to collect herbs on behalf of the herbalists who were hosting them. This was in cognizance of the fact that the demand of these herbs were rapidly increasing, yet the supply was also

supposed to be met in order to maintain a clear and balanced equilibrium of those needing the services of herbal medicine. In essence, this was aimed at establishing self-regulation and pattern maintenance as advocated by the general system theoreticians.

Maintaining the richness of traditional knowledge of herbal medicine depended largely upon the Ogiek's continuous use of their ancestral forest land as a classroom and laboratory (ILO, 2000) and hence conservation of the environment was extremely vital for their survival. Moreover, indigenous knowledge of the Mau Forest ecosystems was learnt and updated through observation and so evicting the Ogiek from their ancestral land would break the generational cycle of learning the apprenticeship scheme of herbal medicine. One informant, Chesimet (2006) from Tinnet acknowledged very categorical that Mau Forest was their pharmacy; indeed more precisely, he asserted that Mau Forest was their hospital, where the herbs were collected and eventually used as medicine.

Generally, the apprenticeship scheme of herbal medicine was passed on only to the already relieved patients. *Orbul* was a reserved place where patients stayed for a while in a secluded natural environment when they were still undergoing treatment (Barkosiah, 2006). Herbs of specific trees were mixed with meat soup for the treatment of patients (Ronoh, 2001). Some leaves from a variety of specific trees were collected and then burnt into ashes commonly used for the cure of heart related diseases (Maina, 2006). *Manget* was used to cure common colds.

While some tree barks and roots were extracted and boiled for the treatment of malaria. Such tree species included, *inter alia*, *Manget-ab Tinnet*, *nukiat*, *Sigowet*, *Kosisitiet*, *emitiot*, *ngechebchiat*, *arorwet*, *tendewet*, *Soget*, *bisigwet* (Chelule, 2006; Tuei, 2006; Sangwea, 2006 and Chumo, 2006). *Manget ab Tinnet* is the by-product found to emanate in some specific trees especially when such trees had been left bare and their barks had been removed either as herbs or as utilized for repair

of beehives. *Ogiek* named it as *Tinnet* but commonly used as medicine. These barks and roots employed as herbs were from a tree called *Chepkologolyo*. For instance, they were instructed to protect the important tree species like *Dombeya goetzeni mukeo*, *Olea euro* and *Olea hochostetteri*; which were used for herbs and honey (Wass, 1995:10-22; IGAD, 2001). Subsequently, they were warned of the problems that they would encounter when the environment had been degraded.

However, roots of *soget*, *Mogoiwet* and other specific indigenous trees were boiled and then used as herbs to cure gonorrhea and other related sexually transmitted diseases (STDS). Indeed, a few herbalists possessed remarkable knowledge of these diseases. Such knowledge was not easily obtained but it could take up to five or ten years for the trainee to become proficient herbalist and ultimately to effect the real cures. During this period, the trainees usually learnt the art of herbal medicine while serving under the tutelage of an older and more experienced herbalist. The

secrets of the profession was easily transmitted but only reluctantly released depending on how speedily the trainee displayed maturity and competence in learning the trade. Thus, very few herbalists were endowed with the skills and techniques of such treatment of this nature. Those who did and performed this art, willed a form of prestige and higher status in the society's ontological frame.

Moreover, when a person was injured possibly during hunting, warfare, or while collecting honey (in most cases), one was given herbs to cure the patient from any anticipated anomalies such as bodily fractures. Among the *Ogiek*, there also emerged experienced elderly surgeons. These were very rare individuals and carried out all sorts of surgery. They transmitted their knowledge to the interested individuals through the process of apprenticeship. For instance, an elder who had the skill would recruit his son or a relative and taught him how to operate on the brain, internal organs, limbs and other body parts.

The apprentice would accompany the herbalist on his regular visits to treat patients and by so doing, they acquired such skill through learning by observation. The skill of surgery was treated with a lot of secrecy and passed on from one generation to generation. In making inference from the Marakwet of Kenya experience (Cheboi, 2009) traditional surgeons learned how to operate the human skull using knives that were specifically designed by local blacksmiths for that purpose. The trainees were taught to understand neurological processes, since the complex blood vessels required extra care so that an individual could not endanger the person's life. Charges for the operation depended on the complexity of the process.

Further, *Warburgia ugandensis* was used to treat chest pains and coughs while *syzygium* aided African diabetes and high blood pressure as well as providing food for young babies. Another good medicinal plant with great potential was *Pygeum (Prunus Africana)*, whose barks were used to

cure prostate disorders, a condition that afflict men mostly at the age of 50 years (FAO,2004). All these herbs were preserved for their cherished values as herbal medicine to the Ogiek pre-colonial society. According to the Ogiek's key cultural consultants and herbalists, all indigenous trees within their natural environment were used as curative measures to prevent various diseases. As a result, the society were inculcated a broad-based educational curriculum of herbal medicine that emphasized the need to have a clear balance and integration of demand and supply framework for effective management of the natural environment so as to ensure steady supply of herbs.

However, the most important plants and trees that were utilized as herbs included, *Senetwet*, *Bobatab tegat*, *Ngatumiat*, *Chepngorriet*, *Silibwet*, *Chepkebech* and *Mosongik*. *Senetwet* roots and leaves were boiled for the treatment of malaria while *Bobatab tegat* was used for deworming. *Ngatumiat* was used to cure heart bans and *Chepngorriet* was commonly employed for the treatment

of malaria. *Silibwet* barks were generally used to cure animals and people. *Mosongik* roots and grains were used to cure small pox and *Chepkebech* was used to treat polio among the Ogiek pre-colonial society (Sang, 2006, Lesan, 2006). Usage of the leaves, barks and roots of various herbs and the curative techniques took the form of boiling the ingredients, or soaking them in water or even crushing them into powdery form. The serialization of these diseases and the prescriptions of each one of them demonstrated a wider spectrum of herbal knowledge that the Ogiek had systematically developed over time during the pre-colonial times. All these herbs were jealously guarded and conserved by the Ogiek as it provided them with their lifetime for survival and existence as a people. One informant summed up the whole issue by stating that it would take many years for a tree to mature and one day to destroy it (Rop, 2006).

It was from such a conception frame that the youths were meticulously taught virtues on the essence of

preserving the environment as opposed to the vices of degradation. Indeed, harvesting and collection of herbal medicine in whatever form (i.e barks, juices, roots, stems, leaves) were done by experienced women and sometimes men, who took into cognizance the need for regeneration of such important plants within the Mau Forest ecosystem.

Honey was used as a curative product (Kratz, 2000). Extracts from roots and barks of specific trees were boiled and the soup was then mixed with honey (*nuriek*) which had already been added to water. The boiled mixture would then be given to the patient. Basically, it was found to cure so many types of diseases (Marindany, 2006). Other non-alcoholic health beverages and drinks such as stews and soups were prepared either traditionally from or with wild fruits or seeds due to their nutrition and medicinal potency.

In a way, herbal medicine aided the conservation of the environment because only the specialists were allowed to extract the herbs from the forests and they were entirely guided

within the framework of their code of ethics governing their profession (Kimiso, 2006). Though, they exploited the environment, they were cognizant of the plants' sustainability. Trees of medicinal value were conserved and it was the responsibility of the individual members and the lineage councils in general to monitor their growth and development. Likewise, during the various rites of passage, the young were taught the importance and fundamental rights attached to these specified trees and hence the society treated them as sacred.

The Ogiek universally guarded their Mau Forest ecosystem from being destroyed by the loggers and members of other ethnic groups. The Ogiek were self-sufficient in their wisdom and knowledge of the environmental utilization of the forests as pharmacies and laboratories. For instance, Mathooko and Kariuki (Kamau, 2008) from the Department of Biological Sciences at Egerton University had noted that by the year 2000; approximately 55 percent of Mau riparian vegetation could be used for

herbal medicine, while 11 percent as food. For many years, the Ogiek have relied on their traditional medicine for treatment. Forests were and still are Ogiek's pharmacies and laboratories.

The medicinal use of plants and herbs for treatment of ailments could become an aid for modern medicine (Nomi, 2004:4; <http://www.Orgiek.org> 2004). Ogiek herbalists in general, could not be allowed to cut trees as a way of obtaining or collecting herbs. Instead, they had in mind the concept of tomorrow guided by God's constitution (Oduor, 2004) to ensure that they had adequate and steady supply of herbs thus reinforcing the perpetuation of herbal medicine as a profession. Pre-colonial indigenous education of herbal medicine is still in force despite rapid social change among the Ogiek. Therefore, trainees in herbal medicine are currently found keeping notebooks with the medicinal preparations written down to aid their memory.



Cosmological related belief systems and practices among the Ogiek

According to the Ogiek's world view (Astill, 2002) God, spirits, ritual crops and animals as well as food items were all inter-related. These vital forces played a critical role in the ontological frame of the Ogiek society that had closer connectivity to the utilization of their social and natural environment. More importantly was the fact that the Ogiek attached greater cultural associations with their ancestral Mau Forest (Nomi, 2004). They performed several cultural rituals and ceremonies that were closely associated with religion and worship. The Ogiek considered their connection to the forest as spiritual and most of their ceremonies such as initiation, birth, death and marriage were linked to the forest (Oduor, 2004; Sang, 2006).

As already revisited earlier, the use of herbs for spiritual purposes and ritual ceremonies clearly demonstrated their integration of the social and the natural environment. Cultural values, especially those inspired by religious teaching,

gave prominence to employing reason and common sense when dealing with the wealth of nature. Respect for the living environment was emphasized in much of the Ogiek's traditions (Chumo, 2006, Mosonik, 2006; Ntoror, 2006). Generally, speaking, environmental awareness among the Ogiek was closely linked to their cultural and religious practices. Indeed, Ogiek Indigenous education could be described as mainly informal and that the process of learning and teaching took place from day to day experience from birth to death and beyond, as the dead ancestors (living dead) continue to exert a great influence on the living members of the community.

To the Ogiek, Mau Forest had a cultural value which could not be quantified in terms of money (FAO, 2004) and an important aspect of their social and spiritual life (Nomi, 2004). In fact, the use value relevant to such forest (non-extractive) made them unique to the Ogiek as a community and this was one strategy that essentially made their conservation a community affair.

However, the council of elders played the major role as the keepers and cultural conservators of the Mau Forest (Sangwea, 2006; Birir, 2006) and that has continuously enabled it to stand out as an important water catchment forest with its rich biodiversity to date but, however, with the entry of other interest groups, these gains has been rapidly reversed setting in the stage of massive environmental degradation.

The Ogiek adhered to and rigidly employed traditional norms and regulations governing the management of Mau Forest ecosystem, as well as local norms and beliefs that governed sacred or fetish groves which in turn prohibited harvesting of forested products and indiscriminate hunting of endangered species. Indeed, river sources were highly protected sites and people were not allowed to fetch water from the source. For instance, many informants acknowledged that the source of River Njoro near Nessuit was nicknamed *Kiplulukit* by the Ogiek and it had an outstanding tale that regarded it as sacred. It was revealed that though





it had very clear and clean water, nobody was allowed to drink water from its source and whoever partake of the same would be struck by lightning and even birds were not spare either (Chelule, 2006; Sambu, 2006). Entry to specific place such as Tinet Forest was only allowed during specific occasion, when it was due to perform community rituals (Sangwea, 2006).

Most of the groves were believed by the community to contain the 'earth god' or spiritual beings that were anticipated to promote peace and prosperity, while checking and correcting anti-social or deviant behavior within the society. This resulted in remnant patches of primordial forest even in places where the Ogiek had resided on a sedentary basis. Most of the relics in Mau Forest have survived because they were considered to be sacred and for their important roles for veneration. Ideally, they were preserved for the cultural expression of this community. Many informants do agreed that such areas e.g. Tinet Forest is still a no-go-zone for strangers and many trees within

this natural forest are mostly regarded as sacred. These trees included *Emitik, Tegek, Tinet, Silibwet Sinendet, Sirtitiek, Korosiot, and Simotwet*. While, there were also sacred animals such as elephants, lions and gazelles which were neither to be hunted nor eaten. Family totems, whereby some lineages among the Ogiek were prohibited from eating animals and birds also offered protection. Such strategies emanated from the Ogiek themselves who had concerned for their environment and its entire ecosystem, an attitude which enabled them to conserve their resources without written legislation. In addition, Ogiek cosmology promoted values that supported conservation and discouraged values and ethics incompatible with sustainable ways of life.

These sacred plants and animals were valued by the Ogiek as they played a central role in their livelihood as a community. For instance, cedar was used for making beehives and 'Sirtitiet' was utilized in the making of bows. While *Nokiriwet* and *Simetet* plants were

used for reconciliation. Similarly, *Osiek* sacred plants which were mostly found growing within the sacred mountain of *Tuluap Lagok* in Londiani were utilized during the performance of initiation rituals and ceremonies. It was at this place that initiation was conducted for the first time and as a result the Ogiek as well as other Kalenjin groups attached greater significance to it as a sacred site (Sang, 2006; Birir, 2006 and Ntoror, 2006).

According to the Ogiek mythology, it was noted that this forest was regarded as sacred and God (*Asis*) had created and made it as a home for animals. Therefore, it was a taboo to clear or destroy it nor was one being allowed to hunt animals out of such a wonderful habitat (Sang, 2006: Tuei, 2006). This justified the notion that the Ogiek integrated among the youth, cultural and spiritual traditions in their orientation mechanisms of preserving the environment. In fact, cultural taboos put restrictions on the use of certain plants, animals and special places. Severe punishment would be meted on



the wrong doers by the living ancestors who violated such taboos. This helped to curb the depletion of natural resources that was considered significant for the continuation and survival of the Ogiek as a community. Recent development indicated that the Kalenjin have pushed for a proposal to have this mountain upgraded into a museum status for conserving Kalenjin artifacts (Sang, 2006).

As we could infer from the ecological status of the Loita Purko Naimina Enkikiyo Forest, where there has been little or no degradation which was attributed to the value and reverence attached to the forest by the local Maasai community. It was noted that the locations of some of the sacred sites were closely guarded secret with only one person per age-group being shown their location (Karanja, 2004). The sacred sites and spiritualism of the Mau Forest could provide historical information for future generation (Astill, 2002). It would be imperative to observe that many of these sacred places are being encroached upon and destroyed

by 'external' people (other communities and timber harvesting companies) leading to a loss of livelihood for the Ogiek community who largely depend on Mau Forest resources for their survival. Therefore, access to and management of this forest was governed by God's constitution ('unwritten law') being administered by the council of elders at various lineage councils and hence above all, the sacredness attached to the plants and animals greatly aided conservation of the same.

From customary laws, the Ogiek developed indigenous management systems that were effective mechanisms in environmental conservation. The creation of institutional curbs such as sacred areas for purposes of worshipping ancestral spirits served to regulate societal attitudes towards the natural environment. This is in line with the assertions that Africans respected God's manifestation in their lives and indeed, God played an active part in human history as seen in terms of supplying them with rain, good harvests, health, cattle and children, in

healing, delivering and helping them, making His presence to be felt through natural phenomena and objects. Therefore, Ogiek continued to practise their traditional religion remembering the importance of their ancestors. In this way, beliefs played a fundamental role in a people's livelihood and in maintaining a healthy and conducive natural environment. In view of this understanding, the Ogiek protected Mau Forest for religious reasons. It was respected as a sacred forest and that reality reinforced its maintenance and preservation as a vital watershed.

The Ogiek people believed in the existence of a supreme being known by various names such as *Torooret or Asiista and Chepbongolo*. They prayed to the deity during sunrise and sunset and they believed in a supreme being that was thought to be beneficent and was invoked in blessings. In their prayer, the Ogiek maintained that the ownership of such areas as forests, rivers, mountains and valleys were belonging to God as its creation and they warned any individual who might



be involved in the destruction of these natural resources that the ancestral spirits could punished them. It was therefore considered the community's duty to protect the environment for the continued survival of the Ogiek and to serve the future generation. It was believed and acknowledged by the Ogiek that the natural environment could not be changed and God *Asis* had made it best to fit them and therefore they were bestowed with a responsibility to preserve it since once it was destroyed, it would never ever be replaced (Chelule, 2006). Thus, in this case, the sacredness of the natural environment became a strong strategy in conserving Mau Forest ecosystem. Omnipresence of God was cherished and acknowledged as the caretaker of the forest and hence the forest had a clear manifestation of sacredness to this community.

According to the Ogiek's ancient myths and stories, God made the Ogiek of the East Mau Forest from "soil gathered at the cliffs" of the Mau Complex (Majtenyi, 2001). It was a universal belief that

destroying of the natural resources would annoy God and the ancestral spirits. The Ogiek believed that the ecosystem and the biodiversity supported by the Mau Forest exemplified the fine balance that must be maintained in this ecological haven (Nomi, 2004). Any alteration would ultimately affect the stability of the forest, thus causing detrimental effects on all of its inhabitants of which the Ogiek were part of it. There was a strong moral conviction that the loss of the Mau Forest and its biodiversity was the loss of the Ogiek heritage. Culture was the fabric that holds the Ogiek together.

According to Lesan (2006) from Tinet Forest, she observed that before our forest was cut down, we had our culture and traditions that clearly stipulated that anyone destroying our forest was destroying our culture. According to her, forests were regarded as determining their cultural destiny and regarded as temples of God by the Ogiek. In fact, as Nomi (2004) contends in this context, that the disappearance and extinction of a culture and heritage

was a permanent loss to mankind that could not be replaced. Therefore, as a result of this deeper understanding, various methods were put in place to jealously protect and conserve their natural environment. In so doing, the Ogiek became the protectors of the Mau Forest ecosystem.

Further, as attested by Beinhart (2000), the ancient African including the Ogiek were revered and praised as frontiersmen who co-existed with nature. Therefore, nature and the environment were described symbolically using human and animal spirits. For instance, land was identified as sacred and powerful through the use of myths and fables and in every undertaking, it was strengthened through conservation efforts to preserve every natural resource base that was cardinal to the Ogiek's existence and survival. Mau Forest provided a way of life, a source of ceremonial and sacred locations such as grave sites (Toweet, 2004) and a place that inspired spiritualism and emotional well-being (Kirui & Mbugua., 2004). The spiritual life of





the Mau Forest offered the Ogiek an impetus to cultivate sincerity and moral commitment to protect the environment and all its inhabitants. The Ogiek drew their inner strength and the purity of consciousness through their integrative approach in the control and management of natural resources. Sacred trees were bestowed with protective roles. For instance, when an individual was being chased by dangerous wild animals, he was strongly advised to climb a sacred *Tinet* tree and it was believed to be in safe hands because such animals would immediately abandoned the chase altogether.

The Ogiek administered their prayers at family level within their various homesteads sacred shrines (*mabwaita*) but, however when there was a serious crisis or disaster such as prolong droughts or an important ritual event, prayers were conducted at a central place called *Kapkoros*. The shrine (*mabwaita*) was a foundation of four strong poles, bounded at the base with vines. It was filled out with leafy branches, the structure as a whole

resembled a tree (Kratz, 1998). The sacred species used were both the properties which made them appropriate for its utility and their other contexts of use contributed to the significance and associations of Ogiek blessings. In this way, the construction of these shrines both at the homesteads and at public places were the responsibility of the elders, who in turn engaged the youth through a participatory learning process to understand the importance of each of these tree species used and imperatively for them to appreciate their sacredness by protecting, maintaining the growth and development of their seedlings.

The Ogiek set up was highly hierarchical and systematic. They believed in the hierarchical existence of vital (Ontological) forces that played a role in shaping the social and natural environment. Based on this hierarchical and ontological frame, the Ogiek generally, believed on a supreme God, or a creative spirit and lesser spirits. They accepted a continuous existence after death, with parents and

grandparents taking an interest in, and even participated in the activities of their families in the hereafter. As a result, they had a strong attachment to the art of herbal medicine where healers received their calling through a dream to practice the profession.

In recognition of this reality, the specialists and diviners acknowledged that they received such divine revelation and calling from ancestors who were healers, to practice the same profession. Instruction in this art was transmitted to other specialists through further dreams. In addition, they attributed sickness and other misfortunes as a punishment from the offended ancestral spirits and the healers had the sole responsibilities of detecting the source of the misfortunes in advance. Such powers of discerning also included, *inter alia*, identifying the cause of the offence and how it could be remedied. In the same vein, they believed that some illness and misfortunes were attributed and associated to witchcraft committed by living persons. Healers were also expected to define its cause





and recommended the appropriate remedy.

For instance, witch-doctors detected witches and occasionally counteracted their power. There were Ogiek specialists and diviners (to administer treatment that was believed to have been caused by evil powers. In the past, corpse was laid to rest in the forest or bush. Upon death, adults became ancestral spirits and could continue to affect the living in so many ways. Ancestral spirits could cause illness and misfortune for the living, if they were forgotten in retribution for the wrongs committed among their relatives (Kratz, 1995:261). If angered, they could bring disease or bad luck to their living relatives.

As a result, there emerged specialists who learnt how to conduct witchcraft (Maina, 2006). Those few persons practising witchcraft did this in secret and supposedly even trained their children in the act. When discovered, a suspected witch was driven out of his or her own home to live with their maternal uncles (Ronoh, 2000). Some individuals were specialists in exorcising

witchcraft and these were very rare people among the Ogiek, and they passed on their skills to their offspring. But, in some circumstances where an individual was not related in any way to the specialist (if not from the same clan) the apprenticeship could take place when the apprentice paid in form of compensation for the services rendered. In most instances, if not otherwise stipulated, a sheep that had no blemish was presented to the aggrieved party as a form of compensation (Chumo, 2006). Most of the activities related to healing had clear influence from the natural environment. For instance, when one individual was on a journey (usually in the morning) and he or she met a hawk sitting facing the opposite direction or a rat crosses his path, that individual should not proceed on his journey as that was a sign of bad luck. This phenomenon reflected how cosmological understandings played a critical role on the Ogiek's daily life undertakings and their knowledge of the natural environment. This demonstrated the inseparable and instrumental role that the social environment greatly

motivated them to conserve their natural environment of Mau Forest.

Conclusion

In fact, their indigenous education was more functional in the sense that it was primarily aimed at helping children in particular and adults to learn and master the necessary social and occupational skills which enabled them to effectively cope with their socio-cultural and natural environment. It was their socio-cultural and belief systems that largely informed intergenerational teaching of the Ogiek as they equipped them to understand the natural world and the art of herbal medicine by navigating through the physical complexity. This also assisted to locate themselves in a supernatural and spiritual context through interpretation of their rights and responsibilities between them and other living things. In essence, it would be objective to observe that it was their inward orientation and gratification as opposed to the outward obligation that made the Ogiek to preserve their environment and perfected their skills and techniques of herbal profession as



well as the general understanding of the cosmological worldview realities.

In this way, the Ogiek heritage was built on a strong sense of responsibility toward sustainable conserving of their natural environment, homeland and their collective venture as a community. As already discussed from the foregoing analysis, indigenous herbal and cosmological learning was largely based on the actual living conditions of the people, their views of the universe, God and its relationship between the supreme being and mankind as well as relationships between various groups of people. In particular, its emphasis was on a broad based curriculum in understanding the natural environment on which the survival and well being of the society depended on and determined by its mode of production. This justified the synthesis being articulated by the cultural ecologists that informed the core of this study as it discusses the imperatives of interaction between the mode of subsistence, cultural and the natural environment.

Moreover, their legacy in professional

training and other rituals were built on the philosophy where the needs of the individuals were subordinated to the interests and needs of the community. Ideally, the Ogiek's herbal medicine, belief systems and practices were based upon not only on the respect of their environment but also upon respect for each other as a distinct foraging people as well as maintaining their status quo. In this respect, the ideology of communalism philosophy and group cohesion became the organizing and underlying pillars of Ogiek's herbal profession, belief systems and practices that guided their involvement in the socio-ecological and economic superstructural development of their education.

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