SYMBOLIC MEANINGS OF INDIGENOUS FOOD SYSTEMS AMONG THE EL MOLO OF LAISAMIS CONSTITUENCY, MARSABIT COUNTY, NORTHERN KENYA

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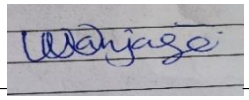
OCTOBER, 2023

DECLARATION PAGE

This thesis is my original work and has not been submitted for examination in any other university.

Signature  Date 5th, October, 2023

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DEDICATION

This thesis is dedicated to the El Molo people of Northern Kenya

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ABBREVIATIONS AND ACRONYMS

AIC:	**African- Initiated Church**
CITAM:	**Christ Is the Answer Ministries**
COVID-19:	**Corona virus Disease 2019**
FGD:	**Focus Group Discussion**
IDI:	**In-depth Interview**
NACOSTI:	**National Commission for Science, Technology and Innovation**
NGO:	**Non-Governmental Organisation**
KII:	**Key Informant Interview**
UNESCO:	**United Nations Educational, Scientific and Cultural**
KWCM:	**Kenya Wildlife Conservation and Management**
WIO:	**Western Indian Ocean (Region).**

ABSTRACT

This is a study on symbolic meanings of indigenous food systems among the El Molo. The study entails giving a thick description of the processes from procurement, preparation, preservation, presentation and performance. This study was conducted between the month of October and November 2020 in El Molo Bay, Loiyangalani ward, Laisamis Constituency, Marsabit County Kenya. The main purpose of this study was to explore the structure and significance of indigenous food systems and knowledge among the El Molo. Specifically, it examined El Molo's knowledge of their indigenous food systems; symbolic meanings the El Molo attach to their different indigenous food systems; and, lastly, the impact of socio-ecological changes on El Molo's perceptions of their indigenous food systems and symbolic meanings.

The study used symbolic theory as theoretical framework where interpretive approach was used to give a thick description on the processes that preceded indigenous food systems among the El Molo. The study population comprised of 1,104 persons, with 96 persons being purposively, sampled. Data was collected using ethnographic techniques of in-depth interviews, key informant interviews, focus group discussions and observation. Data was analyzed thematically by coding into themes and sub-themes.

The study findings indicate that indigenous El Molo food systems are; hippos, crocodiles, turtles, various fish species found in Lake Turkana, fruits from doum palm trees, tooth brush tree and acacia tree as well as various wild birds found in Lake Turkana. Indigenous El Molo food systems are imbued with symbolic meanings which are a marker of their identity, gender, status, medicine, age, status, social relationships and rank of participants. Similarly, the study findings reveal that indigenous El Molo food systems remain a significant marker of their history, culture and identity. The El Molo have developed multiple strategies to maintain their livelihoods through adaptation to changing ecology and social circumstances. In conclusion, the study demonstrates a need to document indigenous food systems and their symbolic meanings among other indigenous communities to preserve this knowledge. This knowledge will also contribute to a growing corpus of knowledge in development anthropology. The study recommends documentation of indigenous food systems and their symbolic meanings. From the findings, hippos, crocodiles and turtles are no longer consumed because they are protected by the Kenya

Wildlife Conservation and Management. The study further recommends that any intervention aimed at conserving wildlife should take into consideration the perceived cultural importance of these animals by the indigenous people. This is because for the El Molo people, these animals are not just wild animals, some of these animals are symbolically important to their culture. Therefore, this study which will form ethnography of the El Molo indigenous food systems should be a precursor to similar ethnographies on other societies.

CHAPTER ONE

BACKGROUND OF THE STUDY

1.1 Introduction.

Food is not only an aspect of human livelihood, but it is also one of the most valued cultural items as it denotes more than nutrition (Fox, 2013). Much as food is essentially a biological need for sustenance of life, food is also embedded with ritual and symbolic significance that finds meaning in cultural belief, knowledge and practice (Oyo et al. 2008). Just like every culture has systems of kinship and nomenclature for various aspects of classification, all culture is an embodiment of a food systems which focuses on immediacy, access and choice, use and reliability (Alonso *et al*, 2017). Oxford Dictionary defines food system as a complex web of activities involving production, processing, transport and consumption. Contreas and Garcia, (2011) define food systems as a process involved in feeding a cultural group.

According to Kuhnlein and Chotiboriboon (2022), food system stems from forestry, fisheries, aquaculture, and crop and livestock production and the interwoven actors and activities for their processing, distribution, consumption, and disposal that shape human dietary patterns, food security and nutritional status (Obiene *et al*, 2022). The approach to food systems is contingent upon cognate factors which mediated by biology, political economy, ecology, cultural, technological sequencing and history (Ingram, 2017; Sobreira *et al*, 2018; Obiene, etal, 2022). Thus, for indigenous people, the food system represents identity construction through their normative values and belief systems (Ericksen, 2006; Ericksen, 2008).

This study envisage indigenous people to be those who keep knowledge of the land and food resources embedded in historical survival within their ecological and geographical locus of dwelling (Kuhnlein and Receveur, 1996; Shilabukha, 2015; Obiene et al, 2022). Indigenous food systems classify all those items selected as food within the particular culture that are available from local natural resources. Apart from physical availability and biological compatibility with human digestive system, such items should also satisfy the criteria of culturally acceptability, including the sociocultural meanings, ritual purity, and acquisition and processing techniques, use, biological and nutritional consequences for the people consuming the food (Kuhnlein and Receveur, 1996; Kuhnlein and Chotiboriboon, 2022). Thus, indigenous food system as indigenous knowledge contains treasure of knowledge that can inform development programs (Sillitoe, 2006).

In anthropology, indigenous food systems are envisaged as symbolic systems in which social codes execute and operate as an endemic and persistent connection between culture and nature (Oyoo et al,

2008; Sobreira *et al*, 2018). From a cultural perspective food is symbolic because it is an assertion of identity in racial, gender, status, regional, and religious groups (Jones, 2007). Therefore, a food system as a pathway of communication varies among different societies in general and for all indigenous people all over the world in particular (Foley, 2005, Oyoo et al. 2008). The type of food we eat, the preparation and cooking processes involved, and the way we consume these foods express who we are, including why we eat as we do. Moreover, meanings and symbolism that govern food are held in respect to culture and ecology; all these operating in an inseparable interconnection (Saxena *et al*, 2016).

Therefore, food systems normally shape our cultures and heritage conversely (Jones, 2007). For the Torres Strait Islanders Aborigines of Australia and Karuk People of Klamath River in California, indigenous food systems remain a significant marker of their history, culture and country (Foley, 2005; Byarugaba, 2017; Lynn *et al*, 2013). On the other hand, among the Lepcha and Limbu communities in northwest India and Naxi-Moso community in Northwest Yunnan in Wumu village in China, the indigenous food systems symbolize their spirituality, health, livelihood, culture and their heritage (Swiderska *et al*, 2022). Similarly, among the Igbo of Nigeria, yam is the ruler of yields, a male's harvest. Yams, in Umuofia village, in *Things Fall Apart* Achebe, (1958) served as a symbol of plenty, blessings and unity which mirrored the sacredness and communal truth of their heritage and practices (Okeke *et al*, 2009: 254).

In Kenya, the subject of indigenous food systems symbolism and their meanings has been undertaken in respect to food security and sustainable livelihoods, beliefs, values, changes in dietary patterns and climate change (Arhem, 1989; Muthoni and Nyamongo, 2010; Rianga *et al*, 2017). However, much of the research and their findings studies shed little is studied about the aspect of indigenous food systems as a centerpiece of symbolism. According to Sobreira *et al*, (2018) food domain transcends social gathering and events, holiday custom, notable occurrences, sacred or ritual adherence. Holzman (2007) notes that among the Samburu of Kenya whose indigenous foods consists of products of their herds namely; cattle sheep, goats and camels, have experienced changes since there has been livestock decline and this has affected their way of life hence changing the domain of food and eating practices. Among the Maasai pastoralists of Kenya, their way of understanding food through history acknowledges that there has been livestock decline affecting their food consumption and signification (Arhem, 1989). Therefore, this study gave a detailed account of indigenous food systems symbolism and their meanings which encompasses processes from procurement, preparation, preservation, presentation and performance (Oyoo et al, 2008; Symbol Food as/ Encyclopedia.com, 2023).

1.2. Problem statement

An account on indigenous food system symbolism and how this domain has been affected by ecological changes as well as changes wrought out by cultural and economic interference has not been explored despite existing literature on foods consumed by El Molo people (Dyson and Fuch, 1937; Scherrer, 1978; Kiura, 2005; Mirzeler, 2006; Odero, 2013; Tosco 2015). Indigenous food system denotes many aspects in which indigenous people link themselves to their locus of dwelling and perpetuate their heritage (Sillitoe, 2006). Socially, the way indigenous people gather and consume their food is important in understanding roles and responsibilities delegated between age and gender (Lynn *et al,* 2013). Additionally, gathering and consuming of food depicts governance and institutional frameworks in a society. Studies among the El Molo, have illustrated their diets, mythical and fictional narratives on food symbolism (Scherrer, 1978; Kiura, 2005; Mirzeler, 2006). In particular, fish as their staple diet and consumption of certain fish species are equated with ease in birthing and as well as used in rituals to appease gods (Kiura, 2005).

Furthermore, studies reveal that El Molo identifies themselves with hippopotamus animal and they also consume crocodiles and turtles (Scherrer, 1978; Kiura, 2005). The foregoing revelations provide explanations on indigenous food symbolism however; indigenous food system symbolism and their meanings have not been ethnographically explored. Moreover, changes in the ecology, economy as well as diffusion and enculturation are perceived to have influence on indigenous food system symbolism (Sillitoe, 2006; Lynn *et al*, 2013). These changes have posed challenges to hitherto firmly embedded indigenous food systems especially those practiced by numerically diminishing communities and those living on the margins of resources (Kuhnlein and Chotiboriboon, 2022; Sillitoe, 2006). Where indigenous knowledge on food is inherited from past generations, maintained in the present generation and bestowed for the benefit of the future generation, decline in indigenous food consumption has led to loss of the traditional knowledge (Sillitoe, 2006). Contemporary studies have examined indigenous food system symbolism, climate change and adaptive mechanisms (Arhem, 1989; Kuhnlein and Receveur, 1996; Meyer- Rochow, 2009). The experiences depict the context of the indigenous El Molo of Northern Kenya. Food is a significant and major arena for people to define themselves, but when a particular indigenous food is not available it is a source of agony as it robes people of their heritage. This study sought therefore, to answer the following research questions;

i. What is the El Molo knowledge of their food systems?

ii. What are the symbolic meanings the El Molo attach to different indigenous food systems?

iii. How have socio-ecological changes affected El Molo perceptions of their indigenous food systems and symbolic meanings?

1.3 Research objectives

1.3.1 General objective

The overall objective of this study was to explore the structure and significance of the indigenous food systems and knowledge among the El Molo of Laisamis Constituency, Marsabit County, Northern Kenya.

1.3.2 Specific objectives

The specific objectives of the study were to;

i. Examine El Molo knowledge of their indigenous food systems.
ii. Analyse and discuss symbolic meanings the El Molo attach to their different indigenous food systems.
iii. Analyse the impact of socio-ecological changes on El Molo perceptions of their indigenous food systems and their symbolic meanings.

1.4 Study assumptions

i. El Molo food systems are influenced by cultural perceptions and indigenous knowledge.
ii. El Molo attach symbolic meanings to their different indigenous food systems.
iii. Socio-ecological changes have affected El Molo perception of their indigenous food systems and their symbolic meanings.

1.5 Justification of the study

The study of indigenous food systems and its symbolic meanings is a positive endeavor because indigenous people are particular in how they gather, process, sort, and cook and eat their food as well as how they relate with their environment. The particularity of how the El Molo conduct activities revolving around different indigenous food systems reveal their ontological ideations. Studies among the El Molo have explored revitalization of their language (Odero, 2013; Tosco, 2015), an ethnography (Scherrer, 1978) and their diets (Kiura, 2005). However, there is gap in maintaining indigenous food system knowledge and practices since this domain is affected by socio-ecological changes resulting in indigenous knowledge loss and disappearance. Furthermore, the El Molo are considered to be the smallest ethnic community in Kenya and are experiencing transformation through dietary changes (Republic of Kenya, 2018; Kiura, 2005). Therefore, it was important to document their indigenous knowledge with an aim to preserve the knowledge. Also, understanding these processes distinguishes the past, present and future of El Molo indigenous food systems and can contribute to reassessing undocumented indigenous foods strengthening their food sovereignty. Moreover, food is a powerful assertion of how we link ourselves to the land and perpetuate our identity (Sobreira *et al*, 2018), and food consumption pattern is expressed through indigenous people's beliefs and values about food (Kuhnlein and Chotiboriboon, 2022; Kuhnlein *et al*, 2009, Kuhnlein and Receveur, 1996). This study

illuminates this by providing a thick description on the processes involved in feeding among the El Molo. Interventions aimed at conservation must consider symbolic importance of some of these indigenous food systems.

Academically, the study findings provide a rich source of data and findings for scholars who are interested in studying indigenous food system symbolism and dietary changes. The study findings will contribute to the rich knowledge on indigenous food system symbolism and expose gaps for further research. Additionally, the study findings will make a significant contribution to development anthropology as it aims at documenting local knowledge that is paramount in development matters. Furthermore, Marsabit County is among those regions of Kenya which host rich, yet untapped socio-cultural data whose analysis can not only inform development projects in the county but also help propel the county's profile in the research community. If adopted, the study findings will contribute to county and national government policies in the areas of tangible and intangible cultural heritage, food sovereignty and environmental conservation.

1.6 Scope and limitation of the study

The study was carried out among the El Molo of Northern Kenya. It used symbolic theory with an interpretive approach to explore symbolic meanings of different indigenous food systems. This included providing a thick description of the processes involved from procurement, preservation, preparation, presentation and performance. Moreover, narratives, myths, oral histories, stories and songs, prayers, ceremonies were studied in respect to their reinforcement of the centrality of indigenous food system symbolism. Additionally, the study investigated effects of socio-ecological changes on El Molo's perceptions of their indigenous food systems and their symbolic meanings. Socio-ecology includes aspects such as ecology, economy, ethnic, culture, history, social institutions, globalization and modernization and others. These aspects were only considered in the domain of meeting food requirements as well as how all these systems influence, interact and co-evolve over time causing changes and adaptation.

The exploratory research design adopted has its own limitations since it only permits the use of small sample size which may affect the generalizability of the research findings to wider populations. Although the study provides linguistical expression to represent realities of different indigenous food systems and their symbolic meanings, local variation in knowledge could only be captured through descriptive statistics such as age, gender, marital status, and occupation, level of education and migration of household members since, indigenous knowledge is widely shared but no one knows it all. Similarly, the El Molo live in an area prone to food insecurity and are recipients of relief food aid from different agencies from the Government of Kenya to non-governmental organization, the study did not

investigate indigenous food system symbolism in relation to food security or nutrition per se. The study was concerned in documenting indigenous food system symbolic meanings in respect to providing knowledge that will be imperative in integrating local knowledge to inform development matters as well as documenting on the changes perceived over time. Finally, due to limited funds and time, the study was conducted for a period of one month.

1.7 Operational definition of terms

Indigenous food systems refer to all foods consumed and culturally accepted by indigenous people as well as all knowledge pertaining from production to consumption of foods.

Indigenous knowledge refers to local knowledge that is only understood by the community living in that locality.

Indigenous people refer to people who have lived in a given area for a very long time as such they have become adapted to their environment.

Socio-ecology refers to different components such as environment, markets, modernization and cultures and how they co-exist, interact with each other and influence each other over time as such resulting in changes and adaptation.

Symbolic meaning this is something that represents ideas or qualities of another thing deemed similar to it.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the existing literature on different aspects of the indigenous food systems. The chapter reviews indigenous food systems in relation to: the nature and significance of indigenous food systems, symbolic meanings as well as impact of socio-ecological changes on perceptions of indigenous food systems and their symbolic meanings. The literature on symbolic meanings outlines food symbolism since only few works have delved into indigenous food system symbolic meanings such as; (Arhem, 1989; Holtzman, 2006; Lokuruka, 2006; Chidume *et al*, 2015). The chapter also outlines and describes theoretical framework, its relevance and the conceptual framework guiding the study.

2.1 The nature and significance of indigenous food system.

Indigenous food system is part of people's culture and way of life and contains treasures of knowledge from long-evolved cultures and patterns of living in local ecosystems (Kuhnlein *et al*, 2009: Kuhnlein *et al*, 2006). The dimension of nature and culture that define a food systems of an individual culture contribute to the whole health picture of the individual and the community (Ingold, 2000: Menzies, 2006). Therefore, indigenous food system is symbolic because humans are the only animals that can cook. Thus, food is acquired from nature and goes through various stages before it reaches the mouth of a consumer and all these are cultural materials imbued with symbolic meanings. In addition, food utilization characterizes settings, speech events, space, social activity, identity and belief (Fitrisia *et al*, 2018).

Indigenous food systems are premised on the indigenous people knowledge of their ecology. Therefore, indigenous foods are acquired from natural available resources; this can include indigenous or cultivated plants and animals (Kuhnlein *et al*, 2009). According to Bruchac (2014), indigenous knowledge as a system is practiced within the context of the social values and philosophies of any given indigenous people. This knowledge encloses sophisticated philosophies and practical measures that are intended to preserve cultural heritage and protect ancestral landscapes and life ways (Veitayaki, 2002). Conversely, indigenous people are adapted to their locus of dwelling and they have constructed their own food systems. These systems are passed from one generation to the next as a way of preserving the tradition (Lugo-Morin, 2020).

A holistically approach to indigenous food systems is sustainable and takes into considerations of all elements, their relationships and related effects in social, economic and environmental facets since a change in one aspect of an indigenous food systems alters other structures that holds the indigenous

food system together (FAO, 2013). According to Menzies (2006), indigenous people cultural understanding of their foods depicts their beliefs, values and traditions which configure their informal institutions. In this context, there is a relationship between the indigenous people and nature where indigenous foods are cultivated, harvested, prepared, served, shared and traded amongst themselves based on the merits of interrelationships, admiration, mutual understanding and ecological sensibility of their environment (Ingold, 2000: Bruchac, 2014; Shilabukha, 2007).

Accordingly, Shilabukha (2015) and Shilabukha (2018) describe indigenous ecological knowledge as extremely detailed since indigenous people have evolved systems of managing their ecology developing an intimate knowledge of their environment discovering ways of conserving their resources. For the indigenous people, there is no difference between food and medicine. These people have consumed their foods for centuries to maintain their health and wellbeing (Veitayaki, 2002). Therefore, indigenous ecological knowledge can be described as cumulative and long-term, dynamic, historical, local, holistic, embedded, and moral and spiritual; a definition that encompasses all that is indigenous ecological knowledge (Menzies, 2006). Indigenous people use their indigenous food systems to communicate individual messages about social relationships, status, gender rules all this serving as food symbol with coded with meanings that are only understood by the giver and the recipient in that particular context (Fox, 2013).

Menzies (2006) and Bruchac (2014) acknowledge that the domain of indigenous food systems is changing due to effects of climate change, migration, encroachment of their territory, development and globalisation. These changes have resulted in the introduction of new foods in the domain of indigenous food systems altering the perceptions and symbolic meanings of indigenous food systems (Kuhnlein and Chotiboriboon, 2022). Though, indigenous people continue to use some of their indigenous food systems indicating their resilience (Kuhnlein and Receveur, 1996; Kuhnlein *et al*, 2006; Kuhnlein and Chotiboriboon, 2022).

For that matter, the Gitga'at of Hartley bay in British Colombia they still retain their indigenous knowledge of harvesting, processing and the use of seaweed as their indigenous food (Kuhnlein and Chotiboriboon, 2022). Although their traditional food system is threatened by climate change and economic restructuring, Gitga'at as a community has remained resilient in the ways they particularly harvest their seaweed. This knowledge is governed by taboos observed particularly when harvesting (Menzies, 2006). Whereas, for the Nuxalk of Pacific Northwest Coast British Colombia, Ooligan fat, Salmon and Shellfish as well as several species of berries, roots and greens represent traditional ecological knowledge of their territory.

Among the Awajun of north-western Amazon Peru, cassava and banana composed the basis of their indigenous food systems supplemented by small portions of meat and sometimes a little fish. For this community, food preparation is women's activity. For the Karen in Thailand, rice consumption still depicts many ways in which the Karen people still retain their traditional diet and traditional knowledge of their ecosystem (Kuhnlein *et al*, 2009). Among the Igbo in Nigeria, the use of yam in rituals illustrates how food is used as a signifier communicating an important aspect in the life of these people (Okeke *et al*, 2009).

For the Maasai and Samburu of Kenya their traditional foods comprised of milk, meat and blood. Their indigenous food systems were supplemented by honey and other indigenous species acquired in the forest (Arhem, 1989; Holtzman, 2007). Among the NgTurkana of Kenya, milk was their staple food whereas livestock was considered a high status food (Lokuruka, 2006). These three communities are experiencing change in their indigenous food system as there is decline in livestock, population growth leading to land demand, ecological and climate change, introduction of Christianity, markets, modernization and education (Arhem, 1989; Holtzman, 2007; Lokuruka, 2006).

The El Molo are described as a community that rely exclusively on aquatic fauna as their staple diet namely; hippos, crocodiles, turtles and fish. They also consume some of wild birds of Lake Turkana as well as gathered fruits (Scherrer, 1975; Kiura, 2005; Odero, 2013). As such, these people are intimately connected to the lake ecology. El Molo diet begun shifting through their contact with the European during the colonial period. Other factors contributing to their dietary change include; markets, modernization, ecological changes, culture, social and relief food aid through various donor organizations. The area inhabited by the El Molo is barren with a very few topographical features. El Molo bay is surrounded by dry river beds located on the surrounding hills and they seasonally flow across the plains into Lake Turkana. The lakes basin does not support agriculture since its water is alkaline with high levels of fluoride. The vegetation is seasonal providing pasture, salt and water to the animals during cyclic droughts (Kiura, 2005). Therefore, this study focuses on indigenous El Molo food systems as a symbol and symbolic properties with which they imbue it.

2.2 Symbolic meanings of indigenous food systems.

Eating food is almost always associated with socialization; humans come together during meal times and this event is symbolic because it represents a sense of belonging, unity and sharing among individuals (Hoskins, 2015; Byarugaba, 2017). Food symbolism alludes to values, attitudes and identities. Jones (2007) observes that most identities are ignored especially those who associate with multiple groups or who embody multi-ethnic identities such as El Molo-Samburu/Turkana. According

to Morgan (1983) symbols are created and recreated whenever human beings vest elements of their world with a pattern of meaning and significance which extends beyond its intrinsic content.

While Firth (1973:20) alludes, that persons do not dwell on symbols solely, but they undeniably disposition and construe their phenomenon and indisputable overhaul it though symbols. Among the Wik-Mungkan indigenous people of Australia, some foods are likened to the male and female sex organs, with different rules of giving and taking food between various kin and affine, such as parents and offspring, siblings, and wife-giver and wife-receiver. Eggs resemble a man's testicles- if a boy collects eggs, his father may not eat them, so the father has to collect eggs so both of them can eat. Also, mud shells (bivalves) resemble a vagina- opening, a mud shell is likened to intercourse so open; children may not give mud shells to parents (McKnight, 1973).

For the Malay people, food avoidance is influenced by the interrelationship between symbolic and empirical logic and foods are classified under the humoral system and the notion of '*bisa*' and '*patang*'. An example is animal foods; spicy foods are hot while many plants like okra plantains are cold. A person suffering from diarrhea will avoid cold foods such as okra because it will *'bisa*' that person while a new mother who consumes foods reasoned as 'bisa' and encounters stomach ache is not a sinner but considered a fool. '*Patang*' are emblem for behavior, leaving the probability of explanation (Laderman, 1981). Samoans classify foods as real and super foods. Their chief foods comprise of; taro, breadfruit, bananas, coconut, fish and shellfish, chicken and pork. A true meal needs the serving of taro and it is almost considered an abuse to serve a respected guest a meal without taro (Seiden *et al*, 2012).

For Gullah women in the Sea Island of Georgia and South Carolina, food preparation and dietary traditions contributes to rationalization of the gendered social relations, knowledge construction and their cultural identity. The Gullah have monopolized traditional skills and knowledge in preparing rice; they differentiate varied variety of grains, cooking technique for a particular grain, describe appropriate texture and viscidity of skillfully cooked rice, preferred place of rice in the main meal and the appearance of food must have a fastidious aspect to be rewarding (Beoku-Betts, 1995:544). Also, they believe that well cooked rice must be filling to their stomachs.

Hence food is meaningless by itself; it is humans who endow it with symbolic meanings (Ing, 2010). Among the Hebrews in the Bible, Douglas (1966) notes that food plays a role in defining what is clean and unclean; for instance, in Deuteronomy 14:3-21 and Leviticus 11:1-8, cattle, sheep and goats were regarded as clean while pigs were unclean and prohibited because they have cloven hoofs of the ungulates but did not chew cud. Prohibition of these animals was associated with holiness, wholeness

and morality. Douglas (1975:76) argues "the person without religion would be the person content to do without explanations of certain kinds, or content to behave in society without a single unifying principle violating the social order".

Therefore, symbols cannot be understood in isolation but in relation to the total structure of classification in culture in question (Douglas (1966). Elsewhere, Harris (1974) explored reasons why pigs were considered a taboo among Muslims and Jewish was not because of religion but because pigs competed with humans for food. Pigs were domesticated animals in the Middle East, but due to ecological changes; it became difficult for pigs to adapt to the environment and since their food consumption is similar to humans it became expensive to keep them. Hence, pigs were regarded as impure and unclean animals associated with dirt.

On the same lane, cattle in India are regarded as 'sacred animals'; treasured animal of Lord Krishna and they served as a symbol of wealth, strength and abundance. On the other hand, Harris (1968:23) refuted this claim by explaining the reasons behind the sacredness of cows through 'cultural materialism' which focuses on and assigns causal preference to the material plight of life such as food and shelter. Mintz's (1985) study on *sweetness and power* introduced historical perspectives of sugar production and consumption in England. Sugar symbolized power, wealth, and capitalism since sugar was only consumed by the English royalty and nobility. As more people consumed sugar, symbolic meanings associated with sugar changed.

Additionally, food is a language that transcends through disparate food spheres (Barthes, 1961; Counihan and Van Esterik, 2013; Stano, 2016). Douglas (1972) observes that among the Israelites, there was a similar connotation in their food system; there were various menu all- around the day, the week and they year. There was also a contrast between meals and drinks, meals were systematized in line with grammar construed as early main and light. Stano (2016) notes, in interpreting food taboos among the Israelites there were divisions among three realms namely; land, air, and water, as well as the basis on which of the animals belonging to such spheres, or drooping in the parity were not touched, eaten, or suitable for the table, but not for the alter. Douglas (1972) interpretations of food meanings and taboos were within this domain.

According to Levi-Strauss (1966), food systems should be reconstructed in a semantic way because food as a language is at the center of signification and communication and this study's interest is on communication as the center of signification. Closely related to this notion, is the sensory approach to interpretation of food such as taste, flavor and texture as perceived by humans. Taste is a psychological charged label of either intimacy and kinship or oddity and detachment (Walmsley,

2006). The three nuances of taste are; senses- along with smell and touch, aesthetic (perception) and social dimension. In particular, food system as a process involves acquiring food from nature (natural taste- selecting food stuffs) to rarefied relish (elaborating on natural foods- preparation and cooking) then to cultivated taste which serve as an amendment of magnitude from what is versed anatomically by the body; to the symbolic morals which humanity equates with flavor (Barthes 1961; Counihan and Van Esterik, 2013; Boutaud, 2012).

Studies of food among indigenous people of Africa are associated with identity (ethnic, gendered, national, classed and generational), rituals and taboos (Turner; 1975; 1967; 1984; Douglas, 1966; Arhem, 1989; Holtzman, 2007; Byarugaba, 2017; Oyoo *et al*, 2008; Shilabukha, 2015; Rianga *et al*, 2017) also stories, narratives and myths emphasize on the essence of food symbolism. Achebe (1958:118) points out:

> *A man who calls his kinsmen to a feast does not do so to save them from starving. They all have food in their own homes. When we gather together in the moonlit village ground it is not because of the moon. Every man can see it in his own compound. We come together because it is good for kinsmen to do so.*

From the above, we can decipher that food is deeply embedded in our livelihood as it engages all senses evoking strong associations among individuals. For the Luo of Southwestern Nyanza, there is a saying '*kuon oketho kar bet*' meaning people draw to the table during mealtimes unsettling the sitting order. Also, there is a proverb used during mealtimes '*chiem gi wadu*' meaning to eat with your neighbor (Oyoo *et al,* 2008). In addition, for the Igbo of Nigeria in the fictional narrative of Chinua Achebe (1958) '*Things Fall Apart*' the kola nut (*Oji*) revolves around their livelihood and fulfills different societal functions. Though not pleasant to the taste, kola nut serves as a symbol of unity and blessings; giving atonement and splitting it is a dignified observance which mirrors the sacredness and communal truth of their heritage and practices. The dialogue between Ezeulu and his friend Akuebue in the novel '*The Arrow of God'* (Achebe, 1964), sheds more light on oji and the substance number of lobes.

First, it has two major edible species, one that is constantly double-lobed (*gworo*) and the other with varying number of lobes (*Oji-Igbo*). *Oji-Igbo* can have as many as eight to nine lobes carefully lined inside one nut; extreme care is taken in the case of *Oji-Igbo* where one usually makes serious prayers as the tally of lobes contained inside the nut governs if or not one is qualified to eat *oji* in the first place while *gworo* can be eaten by everyone including women and children. "If a nut of *oji* contains a number of lobes from one to three, it is not eaten by ordinary persons. For instance, if a nut of kola contains one or two lobes, which is a constant equivalent of *gworo,* the kola nut is said to be dumb

(*Oji-ogbi*). It is given to the chief priest or a very elderly person around who returns it to the gods since by implication they (the gods) wish not the kolanut to be eaten. If a nut contains three slices, it is said to be *oji-dike* (warrior-kola) and it is given only to warrior. A four lobed kolanut can signify peace and fertility (*oji udo na omumu*) respectively" (Chidume *et al*, 2015:20). Therefore, kolanut is embedded in Igbo culture postulating their world view. Cultural cues are used to represent meanings which have to be interpreted within their given context because meanings can be risked due to its complexity (Chidume *et al*, 2015).

Lokuruka (2006) offers interpretations of symbolic meanings of indigenous food systems among the NgTurkana. For this community, milk is their main diet though livestock is considered a high status food and meat cuts from their livestock brings out symbolism aspects such as; age, gender, status, rank of the recipient and respect. Similarly, among Maasai and Samburu of Kenya their staple food comprises of milk, meat and blood and associated with rules and values. Their diet ideation system can only be understood in line with symbolism (Arhem,1989; Holtzman, 2007).

For the Kalenjin community of Kenya, pregnant women are not allowed to eat animal organs obtained from domestic animals such as; tongue, heart and male reproductive organs and the udder with an exception of liver. Only women in menopause are allowed to consume these organs, the belief is that a woman will become barren if she consumes these organs or the child would become talkative if the mother consumed either of the animal tongue (Ringa *et al*, 2017). Shilabukha (2015) notes, among the Giriama who are found along Kenya north coast, there are taboos, beliefs, rituals, proverbs, songs, curses and spells that govern their mangrove ecosystem. An example is; it is a taboo for a menstruating woman to go fishing as she is considered impure. Likewise, men have to take a bath after sex before fishing expedition because intercourse is believed to pollute the body.

Scherrer (1978) and Kiura (2005) reveal variable configurations on indigenous food systems among the El Molo. Kiura (2005) observes "Fishing is done by the use of hooks, rafts and netting. It is the sole duty of the strong men and in most cases is a communal activity whereas women and children help in retrieving fish from the nets, clean them up removing the inner stomach through a cut along the neck. Ownership of the fish depends on the group or family involved. Once this has been done, the fish can either be taken in doors for family consumption or it is spread out in the sun to dry. Dried fish can either be stored for consumption or be sold (Kiura, 2005:108). The inherent literature shows input and output generated in the processes involved in food acquisition. Scherrer (1978) conducted ethnographic work among the El Molo and the literature highlights myths, stories and narratives associated with indigenous foods among the El Molo. She does not offer symbolic interpretations and meanings

preceding these activities. Therefor this study gives a thick description of indigenous food practices among the El Molo.

2.3 The impact of socio-ecological changes on perceptions and symbolism of indigenous food systems.

Rapid changes in ecosystems have been witnessed due to natural and anthropogenic activities especially in the second half of twentieth century. Anthropogenic activities include; carbon dioxide emissions, use of fertilizer and increase use of fresh water through creation of dams and other structures along rivers affecting the flow of water into the rivers. This has resulted into major disasters such as sea level rises and human stressors such as development among others (Wandiga, 2006). According to Knapp (2007) and Jaiswal (2018), ecosystem as a concept is quite complex and can only be understood in terms of multiple possible interconnections. As an ecological concept, ecosystems helps to study the history and culture of human groups and societies to expound their success, failure, or adaptation.

Kuhnlein *et al*, (2006) notes that ecosystems also help us to understand human societies since human economies are based on the exploitation and management of nature. Additionally, Bene *et al*, (2019) stipulates that factors affecting socio-ecology include; socio, cultural, environmental changes and economic dimensions. From the literature reviewed regarding indigenous knowledge of ecosystems and their indigenous foods, most scholars have focused on traditional ecological knowledge and traditional foods of Aborigines of Australia and American natives (O'Dea, 1991; Foley, 2005, Ferguson *et al.*, 2017).

Among the Aborigines, their successful survival strongly depended on intimate and detailed knowledge of their traditional ecological knowledge strongly linked with an ontology such as that shaped by the "*Dreaming"* (O'Dea, 1991; Foley, 2005); these ecological concepts relied on indigenous ecological calendars to secure food throughout seasons. Thus, the Aborigines obtained their diet from a broad area of uninhabited plant foods and wild animals (O'Dea, 1991). Food practices and consumption patterns among the Aboriginals transitioned due to colonization and majorly due to environmental changes (rise in temperatures, fire weathers, changes to rainfall seasonality, and drought among others) affecting indigenous foods such as; bush tuckers, kangaroo, emu and crocodile among others where current food system is described as a system with no specific cultural ties or values (Foley, 2005; Ferguson *et al*, 2017). In America, indigenous ethnic groups have some distinctive and various tie-ins with areas, bionomic proceedings and species. This is illustrated in the corresponding relationships which are foundational on how tribes counter ecological changes (Lynn *et al*, 2013).

Wabanaki people interpreted the flowering of the shadbush which concurred with coming of the spring as an indication for the people to advance to the lowlands. This traditional ecological knowledge has been affected by climate changes which also affects food acquisition patterns. For the Athabascan people of central Alaska, moose is their staple food. Changes in moose habitat have put pressure on people's traditional diets (Lynn *et al*, 2013). The Anishnaabeg indigenous people of Canada are experiencing a collapse in wild rice which negatively influences their well-being; this is due to warming waters and adjustment in water levels which are undermining the propensity of untamed rice to breed and prosper in its native area.

Also, over harvest, habitat degradation, urbanization and water aberration have led decline of salmon populations which is primary to many lives of native peoples. And for the Colville Tribes of Columbia have lost access not only to salmon but also their native fishing enclosure ensuing the building of the Grand Coulee Damon the Columbia River and the filling reservoir behind it (Lynn *et al*, 2013). Similarly, the traditional Fufunati food system comprised of marine foods supplemented by other crops which has been affected by ecological and climate changes, clash of culture and markets among others. This community have retained consumption of local fish that is described to be of high nutritional value. (McCubbin *et al*, 2017).

Elsewhere, farmers in Colomi Asia are feeling the changes in the timing and distribution of rainfall patterns affecting production and consumption of their traditional native crops (Byg and Salick, 2009). Additionally, Byg and Salick (2009) notes that Asia-Pacific is prone to natural disasters such as typhoons and tsunamis with Anthropocene these catastrophes are on the rise affecting indigenous food systems. The farmers are now practicing agro forestry cropping system, conservation agriculture and sustainable intensification adapting to climate changes. Across African societies socio-ecological changes is seen in the frame of environmental changes and other current stressors such as; poverty, discrimination, diseases, rise in water temperature, pollution, urbanization, policy restriction among others have caused rapid dietary change posing threat to utilization of indigenous food and the indigenous knowledge essential for indigenous food system maintenance (Kuhnlein and Receuver, 1996; Lynn *et al*, 2013). For the !Kung bushmen of the Kalahari Desert, Botswana, ecological changes is reflected in transition to settlement life.

The !Kung people who were hunters and gatherers are now employed in agricultural labor among the white settlers who introduced cattle ranches and brought cows to their traditional lands. !Kung land is sought by game reserves, white settlers and government; also, there is disappearance of native vegetation, water pollution which is caused by competition between cows, with Jul'hoansi and their

game animals need. Where their diet was meat and vegetable/plant food today are purchased from local store which in result affect their symbolism associated with their food system (Kuhnlein and Receveur, 1996).

Among the Nankane of northern Ghana, climate change, trade, labor migration and evolution of the cropping systems have led to changes in diet. Where sorghum was their main staple food, it was replaced with millet, hunting decreased significantly, and grazing became prohibited (Kuhnlein and Receveur, 1996). In Simbu province in the highlands of New Papua Guinea, changes in traditional food systems were evident with increase in cash-cropping system (Kuhnlein and Receveur, 1996). For the Igbo of Nigeria, they are now practicing mixed cropping based on root/tuber as an adaptation technique to the climate changes (Okeke *et al*, 2009).

In Kenya, climatic change is based on people's world view, and the changes are either attributed to the work of God or various indigenous belief systems (Shilabukha, 2015; Opande, 2017). Farmers in Ahero irrigation Scheme and in Kiambu County who have been affected by climate change are now practicing shifting of planting dates followed by interspersing of long and short cycles crops as a way of coping with climate changes (Kuria, 2009; Opande, 2017). Also, climatic change among the Borana in Isiolo County have led to the death of their livestock resulting in hunger, poverty and displacement. Their coping mechanism to these changes is not effective as they migrate from one region to the next in search of water and pasture for their animals thus, encroaching their neighbors' spaces creating conflict (Kagunyu *et al*, 2016).

For the El Molo, socio- ecological changes are associated with the shifting of rainfall patterns, cyclical droughts, and construction of Gibe III dam associated with large scale farming and hydroelectric power generation in the Omo-Turkana Basin posing major challenges for indigenous food systems (Kolding, 1995; Gownaris *et al*, 2015; Hodbod *et al*, 2019). Thus, these threats facing Lake Turkana are of great concern as they affect indigenous El Molo food systems affecting future persistence of a culture that has been ongoing over generations. Whereas most studies have focused on ecological changes along Lake Turkana, they did not anthropologically investigate indigenous food systems in the context of socio-ecological changes. Additionally, ecological changes being experienced along Lake Turkana reveal its effects on surrounding communities (Ojwang *et al*, 2016; Hodbod *et al*, 2019). However, these studies do not account how a food system as a process is affected by these changes. Hodbod *et al*, (2019) study on present scholarship on the crush of the Gibe III dam and linking extensive farming in the Omo-Turkana channel least examines indigenous food systems other than emphasis on the effects

of livelihoods among the surrounding communities. This study addresses how socio-ecological changes affect El Molo perceptions of their indigenous foods and their symbolic meanings.

2.4 Theoretical framework

The study used symbolic theory to explore the meanings of food among the El Molo. It explored the meanings of indigenous food systems as it is unveiled through tracing flow of food from the natural habitat to humankind. The notable disciples of this theory include Geertz (1965; 1972; 1973); Turner (1967); Schneider (1968) and Douglas (1966). Symbolic theory analyses how people accord meanings to their reality and how this reality is conveyed by their cultural symbols. Geertz (1973a:5) focused on meanings of the symbols "believing with Max Weber that man is an animal suspended in webs of significance he himself has spun, I take cultures to be those webs, the analysis of it to be therefore not an experimental science of law but an interpretive one in search of meaning".

In the study of Balinese cockfight, Geertz (1973) study uses interpretive approach to illustrate the meaning of a cultural phenomenon of Balinese cockfight. He interpreted these cockfights as a normal way of life of Balinese people where these cockfights brought together such themes as animal brutality, manly narcissism, rival wagering, status and opposition, which were integral to the Balinese people and culture. Thus, on the level of cultural analysis, indigenous food systems are ways of preserving culture since people define themselves through food, others by the food they put together, plate up and gobble (Jones, 2007).

Turner (1967; 1974; 1975; 1986; 1987) interest was in the characteristics of symbols the way they condense or capture meanings. Symbols by their nature are multifocal and multivariate and they can represent many things at the same time (Turner, 1975:155). An example is the analysis to understanding the puberty rituals among the Ndembu of northwestern Zambia for instance the non-permanent sanctuary to trapper fore-bearers named Chising'a. The Chising'a is three or four barbed branches whose margins are honed to reconstitute the 'intensity' of huntmanship. The bark is skinned to divulge its favorable innermost worth of whiteness related in Ndembu notion of milk, consequently fertility and nurturance. Entwined grass is strapped below the minutest spine to constitute animals and predecessors' hues that emerge from the scarlet sepulchre to guzzle the gore presented to them by the trappers. The aforementioned three aspects shape chunk of an intricate verbal explanation which surrounds the countless non-verbal symbols of Ndembu way of life in nexus of unequivocal importance (Turner, 1975:154). Elsewhere, Schneider (1968:1) expounded culture as a structure of symbols and meanings.

Schneider was intrigued in the connection linking cultural symbols and perceivable occurrences and attempted to distinguish the symbols and meanings that guided the ruling of a people. He saw culture as a sequence of symbols where symbol is an object which stands for something else (Schneider, 1980:1). Whereas, Douglas (1966) traced the words and definitions for dirt matter weighed topsy-turvy in distinct societal settings. Douglas (1966) investigated the contrast between pure and impure encapsulating the significance of communal past and setting. Her case study unearthed Jewish food prohibitions to a symbolic-borderline preserved structure built on the taxonomic grouping of holy and dirt animals.

This theoretical framework has recently been adopted by other scholars among them (Arhem, 1989; Holtzman, 2007; Rianga *et al*, 2017). Arhem (1989) offers an understanding of dietary ideals that embody the ground rules of the Maasai culture. Holtzman (2007) shows the Samburu understanding of history through food whereas Rianga *et al* (2017) sought to understand food beliefs and practices among pregnant Kalenjin women. Jones (2007: p. 129) in the article "*food choice, symbolism and identity"* notes that meanings surrounding the preparation, service and consumption of food are understood correctly only when interpreted. Accordingly, the meanings surrounding food may be ambiguous or conflicting because one item may represent different things. In the article "*We Got our Way of Cooking Things: Women, Food, and Preservation of Cultural Identity among the Gullah* Beoku-Betts (1995) discovered symbolic interplay between food preparation and feeding among the Gullah women. Beoku-Betts (1995) concludes that cooking and eating perpetuates cultural survival and group identity among the Gullah.

In addition, knowledge is passed down from elders to younger generation where the younger generations learn their traditions which are deemed essential to the survival and maintenance of their culture. Food is symbolic because its meanings are only accessible to insiders. Douglas (1966) calls for attention to the symbolism of classificatory processes which must be interpreted to give meaning. Conversely, Levi-Strauss (1997) notes that food symbolism can be used when seeking to understand what make us human. According to Arhem (1989) dietary ideals among the Maasai have deeper symbolic meanings. According to this theory, activities surrounding food from harvesting to consumption have deeper meanings which ought to be interpreted. Symbols are referred to as "sources of illumination" or "vehicles of cultures" where humans position themselves with systems of meanings in their particular cultures for identity (Geertz, 1973a:45; Ortner, 1983:129). Therefore, this study posits itself on the interpretive approach of symbolic theory to analyse symbolic meanings of indigenous food systems.

2.4.1 Relevance of the theory to the study

Symbolic theory is relevant for the study as it aided the investigation of symbolic meanings of indigenous food systems among the El Molo. It also helped to understand how messages are conveyed through the food system process as culture is made of symbols which have to be interpreted where members of a society share most if not all of these symbols. Therefore, interpretive approach of symbolic theory came in handy especially in trying to understand indigenous El Molo foods, activities surrounding indigenous El Molo food systems and their meanings and how socio-ecological changes have affected the perceptions of indigenous El Molo food systems and their symbolic meanings. The activities surrounding indigenous El Molo food systems have deeper meanings and should be explained. In this line, therefore, interpretive approach was appropriate because it emphasized meanings beyond the superficial activities. Activities of food system are embedded in a social context and a natural environment.

One of the pillars of the indigenous food system is the perceptions and knowledge of what is considered to be food. From ancient times, the community perceived the features of the universe and integrated that understanding with societal components such as; parties, rituals, dances to initiate and keep their food system. Investigating these elements are key in understanding the pillars of the El Molo food systems. This is because the food system is influenced by cultural perceptions, which in turn are premised on indigenous knowledge of the resources from which food is extracted.

The indigenous knowledge is stored in the local language from which we can infer the interpretive symbolic meanings of indigenous food systems. Understanding these processes helped to differentiate the past, present and future of the El Molo food system and understand how the symbolic meanings have changed over time. This also helped unravel some of the elements of the symbolic meanings which have not changed for millennium up to this day. This determination is due to the profane course of the frame of mind of the group.

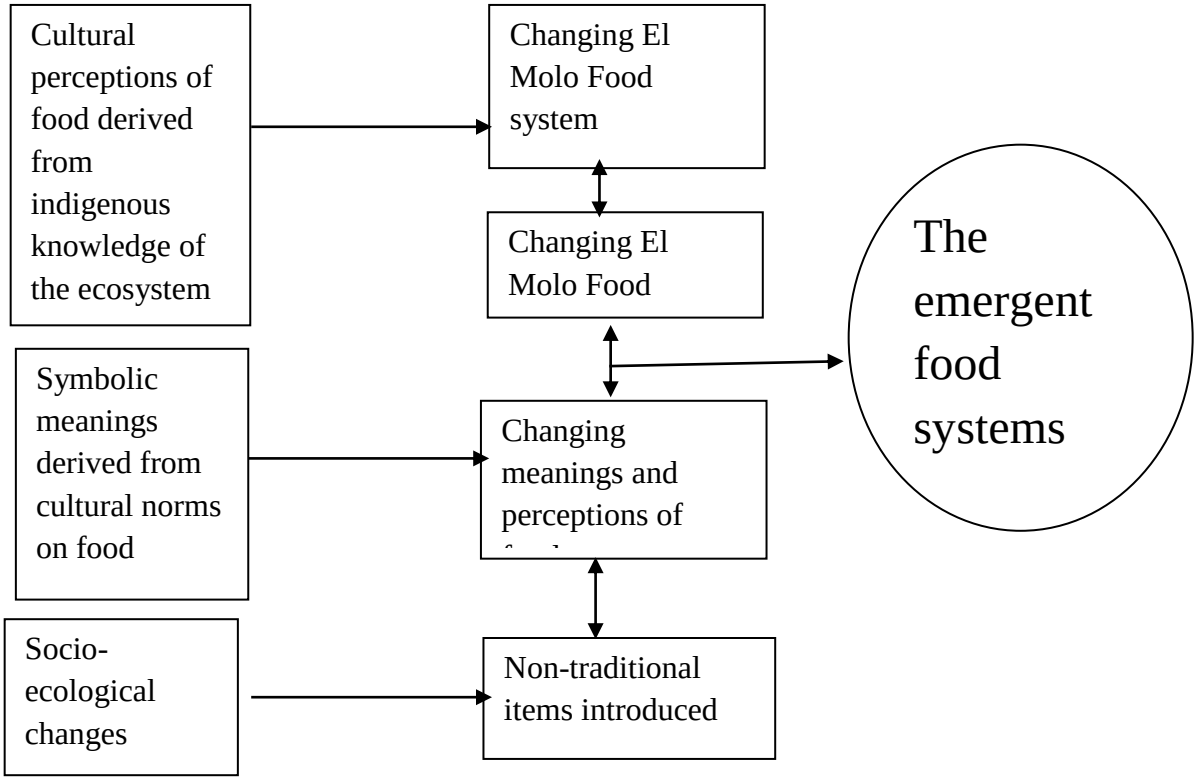
In trying to understand how socio-ecological changes have affected the symbolism meanings associated with indigenous El Molo food systems, it was important to link their culture to the environmental diversity in which they are operand. The acute exchange of products unexpected in their locality is the impetus for numerous additional conformations of interrelation, which pacifies since prehistoric times the joint composition of an ordinary past and lifestyle heritage for the community. Changes in ecology, society and economy imply repeated ethnic procedures in ancient periods forming the illuminated institutions encountering fashioned food production and management. Under this reasoning, organizational pliant has been crucial to indigenous food systems. From there, to understand

the non-linear characteristic of natural ecosystems from which the food systems emerge through cultural adaptation, the study tried to build this understanding into an socio-ecological epistemology.

In the process, the relationship the El Molo have built between nature and culture, through indigenous knowledge that weaves the food system becomes that of a symbolic system. This system is loosely coupled so that changes described as adaptive are actually organisms themselves and their environment to preserve and stabilise that relationship through patterns and variations. In this way, indigenous food systems, through cultural and social adaptation knowledge is represented as arising from an intricate symbolic structural system composed of three subsystems namely; context, practice and belief. Thus, indigenous knowledge that produces a dynamic food system is based on history, demographic factors and biophysical features and experiential learning.

Therefore, food system as a belief portray the influence that spirituality, laws, norms and values have on how people act within their ecosystem. At this point it was prudent to introduce ethnography in support of a symbolic structure, through a non-materialistic conception of an ecosystem. The El Molo indigenous food systems is thus complex symbolic cocktail of cultural perceptions of what is appropriate food, based on indigenous knowledge of what is available and compatible with human consumption. Those resources which have part of the food system are accorded symbolic meanings, which in turn are derived from the body of cultural knowledge, norms, beliefs and practices.

The cultural pillars then formulate the processes of food production, preparation, presentation and consumption. At another level, the El Molo have had to contend with socio-ecological changes brought about by climate over the years. On top of these, there have been changes in the economy and modernization which have influenced changes in choice items that have been added to the food system. From the foregoing, relationships between the major variables of the study can be summarized in the conceptual framework in the Figure 2.1.



Source: Author, 2023

Figure 2: Conceptual framework.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter describes the research site, study design, study population and the unit of analysis, sample size and the sampling procedures, data collection methods and analysis. The chapter also has a section on ethical issues.

3.2 Research site

The study was carried out in Loiyangalani Ward, Laisamis Constituency, Marsabit County, Kenya (Figure 3.1). According to Republic of Kenya (2018), Marsabit County covers a surface area of 70, 761.2 square kilometers. The county borders Ethiopia to north, Turkana County to the west, Samburu County and Isiolo County to the south and to the east by Wajir County. The county lies between latitudes 02" 45" north and 04" 27" north and between longitude 37" 57" east 39" 21" east. The approximate geographic coordinates where El Molo people inhabit are 2° 45'N, 36° 43' E (Tosco, 2015). Most of El Molo inhabit two villages namely; Layeni (6 kilometers north of Loiyangalani) and Komote (13 kilometers. north of Loiyangalani) while a minority live at the center of Loiyangalani town (Kiura, 2005). Other El Molo live in Palo village, surroundings of Mt. Moite and on an Island Illeret, 70 kilometers south of the Ethiopian border. Considered to be the smallest group and at times mentioned as Africa's smallest ethnic group, the Republic of Kenya (2019) reports there are 1,104 El Molo residents'. They neighbor communities such as; Samburu, Rendille, Turkana, Gabra, Watta, Dassanech (Gelluba) and Pokot (Dyson and Fuch, 1937; Kiura, 2005).

3.2.1 El Molo ethnographic profile

The El Molo are referred to as *Gurapau* or "people of the lake" or *lomolo* meaning 'leech' a derogatory word used by the Samburu in reference to their long stay in water while fishing. El Molo origin is quite unresolved; historically, El Molo belong to the *Lmarle* clan also known as *Urialpula* clan who are believed to have migrated from Southern Ethiopia due to famine, drought and war and settled at *Kirtale* which is today known as Alia-Bay. The *Arbore* of Ethiopia, who practice agriculture, are said to be related to the El Molo people as their culture and language have similarities. Historically, El Molo spoke El Molo language as their native language belonging to the Cushitic branch of the Afro-Asiatic family (Odero, 2013). Today, due to assimilation and acculturation by the dominant community- the Samburu, El Molo are said to have shifted to the Nilotic Samburu language. On the other hand, Tosco (2015) argues that the El Molo language is far from being dead and forgotten since astounding large amount of the vocabulary of the language is still known and to a certain extent, still used. In Ethiopia,

the El Molo are believed to still be having the knowledge of some bits of ancestral language though they too have adopted Dassanech language (Tosco, 2015).

The El Molo are divided into various units; the El Molo as an ethnic group, the patri-clan (ori), the council, the moiety, the lineage, and finally the family. The seven patri- clans provide leadership, learning, and protection; the parti-clan is the focal point of worship for the community. Four of the clans have shrines represented by small altars *(gantes)* located on Lorian Island between two villages namely; Layeni and Komote. These shrines are still used today for traditional prayers and sacrifices (Dyson and Fuch, 1937; Scherrer, 1978). According to Scherrer, (1978) and Kiura (2005), these seven clans and the four shrines are; *Orikara* clan which is considered to be the most important and functional clan in El Molo community responsible for hippo hunting.

They are believed to have power over hippos; members from this clan can bless or curse a hippo hunting expedition. *Origalgito* clan has powers over crocodiles, and hyenas. These people can bless or curse a crocodile hunting expedition. *Orialpula* are divided into four sections; the *Lemuska*, *Lepopote*, *Lemotoo* and *Lekikol*. They are believed to have powers over Nile perch, rain and the soil. *Origaya* (blessing clan) clan is divided into two categories made up of two brothers; *Lengutuk* and *Lenginyok*. The clan members are believed to have powers over mud fish where they pray to their god (*Waaq*) for fish especially mud fish during periods of drought.

Orisole clan deals with solving crimes and any other misunderstanding in the community; also, the clan members are believed to have powers to curse an individual from talking. *Orisiayo* clans have powers over fire, eye-sight and milk. In the past, members from this clan restrained themselves from consuming milk since they believed that their power of speech would be lost; but today, they consume milk. Members from this community noted that elders were called to bless them so that they could be allowed to consume milk. A fire ceremony is performed by this clan in a place known as “rock of El Molo” or “Soit El Molo”; they also have powers to curse, they can pronounce blindness to persons or enemies as a form of punishment. This curse is performed on neighboring communities who try to attack them. They light and put fire in any occasions either an attack or ceremony. The *Olgalgite* clan has powers over reproduction. Special dolls made of clay are found on this clans’ shrine. They pray to (*Waaq)* when a woman is barren to be given children.

The four shrines where prayers and sacrifices were/are conducted include; *Orialpula*- individuals from this clan visited this shrine during the dry period or during war. Items found on this shrine are yellow soil and dolls made from stone carvings; the former represents earth while the latter is a symbol of people living on this earth. *Olgalgite* shrine is very important among the El Molo because it is

responsible for fertility. Items found on this shrine are two dolls (a black male and red female) from stone carvings, zebra skin where the dolls are laid. Couples visit this shrine if they have trouble conceiving and stay here for two nights with an elder of the *Olgalgite* clan. The elder conducts prayers while placing the dolls on the woman's womb, followed by cries and shouts for children. *Orikara* shrine was visited by old men to ask for blessings before the beginning of a hippo hunt. The fourth shrine is *Lmarle (Urialpula)*; individuals from this clan have to accompany other members while visiting Mt. Moite to conduct a blessing ritual before any activity or ceremony can take place.

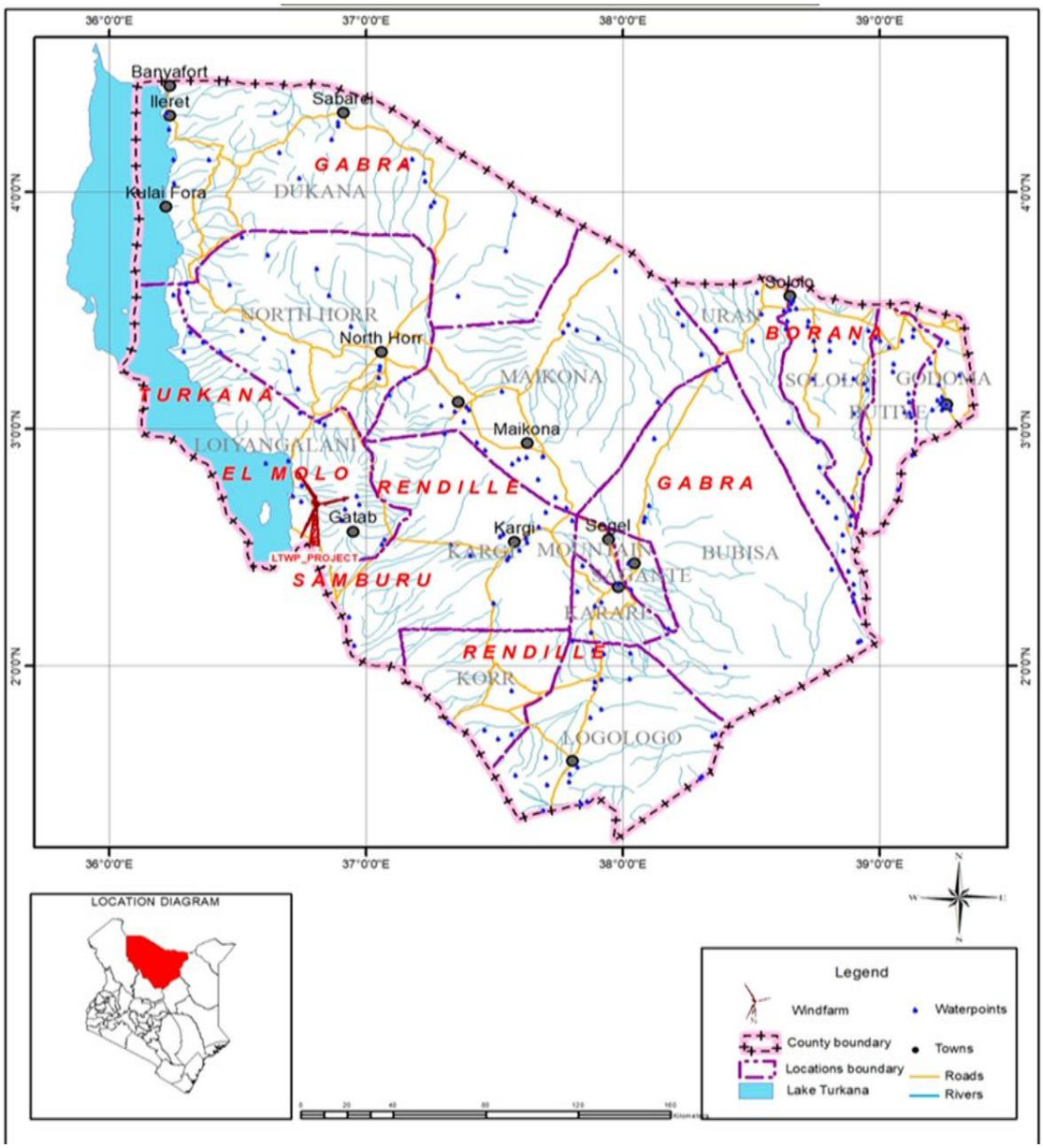
Mt. Moite is very revered among the El Molo; they believed that (*Waaq*) reside in this mountain. These clans maintain social order and cohesion among the El Molo while the shrines are used to renew their relationship with their god, ancestors and spirits that hover around the lake. The shrines also perform the function of renewing social relationships and maintain cohesion and continuity of the El Molo society whilst simultaneously conveying a sense of well-being (Scherrer, 1978; Kiura, 2005). Similarly, there is an institution of a headman who is chosen from *Orikara* clan and the headman is responsible for equitable distribution of surplus among the community as well as solving disputes. Today, this position is replaced by position of chief and sub-chief. The council consists of all married male members that assist the headman in solving disputes Additionally, El Molo men divides themselves into two moieties *Korchir* and *Marsara*; the sole function of these two groups is for hippo hunting. The lineages are composed of three men who consider themselves as coming from the same origin. The primary function of lineage is to cooperate and work as a group. These men might be related or not. Finally, family is composed of father, mother and the unmarried children (Scherrer, 1978). Today, the El Molo practice polygamy; a culture borrowed from the Samburu community (Kiura, 2005).

In many African cultures, there are major initiation rites which are fundamental to human growth and development. Among the El Molo these rites include birth (involves naming of a child and *Aliano* for the boys and girls), adulthood (involves initiation of removal of two lower teeth and circumcision), marriage, eldership and lastly death/ancestorship. For the El Molo, the rite of birth is one of the first initiation rites that involve initiating the infant into the world. When a child is born, there are rituals and ceremonies performed to welcome the new born in the family which is fundamental to their growth and development as well as socialization. Also, the child passes through various rites unto their adulthood which marks a major transition to full group membership in their community.

In the past, the El Molo did not circumcise their male children by the cutting of the foreskin. There was an initiation that took place once a boy child reached the age of fifteen (15) years called *laji*. Today, the

El Molo circumcise their male children by cutting foreskin but this circumcision is not recognized until the male child under goes the traditional circumcision. The girl child is circumcised on the second day of her wedding celebration then, on the third day, she is escorted to her matrimonial home. The El Molo practised endogamy in the past, but today, they are intermarrying with other ethnic groups. This community did not bury their loved ones in the past instead, they laid them in caves or tombs which were then sealed with stones.

Today, they bury their loved ones where they are either covered with sheets or blankets. In addition, the El Molo worshipped their god (*Waaq*) who resided/reside in Mt. Moite. This is a very sacred mountain to this community as well as the Rendille community who are believed to be part of the first El Molo immigrants. Today, their belief is syncretism a combination of traditional practices and Christianity which asserts their underlying unity. This approach has allowed inclusivity of some El



Figu

3.3 Research design

The study was cross-sectional, descriptive and exploratory in essence (Bryman, 2012). The study design was adopted as it entailed exploring a phenomenon of perceptions to explain and gain a deeper understanding of the phenomenon under study. The research design allowed the exploration of perceptions which cannot be quantified (Guest *et al*, 2006). The study relied upon in-depth interviews with the community members. In-depth interviews collected both qualitative and quantitative data. Quantitative data collection elicited information on age of the participants, gender, and marital status, and occupation, level of education and migration of household members whereas qualitative data gathered on thick description. Key informant interviews were conducted with 'experts' who are knowledgeable on different indigenous food system symbolic meanings and socio-ecological changes. Focus group discussions were conducted with homogenous group of males and females. Lastly, observations and secondary data were also used to gather data. The research methods elicited data on; different indigenous food systems and their symbolic meanings and impact of socio-ecological changes on El Molo perceptions of their indigenous food systems and their symbolic meanings.

3.4 Study population and unit of analysis

The study population included all individuals from El Molo community aged 32 years and above living in the research site. The unit of analysis was the individual El Molo aged 32 years and above residing in the study site. The age for the study was chosen because this is a generation that was perceived to have had knowledge and experience on some of the indigenous food systems. Although Kenya Wildlife Conservation and Management Act existed, it entered into force in 2014.

3.5 Sample size and sampling procedure

Participants for this study were purposively sampled based on their knowledge and experience. The study interviewed 96 respondents, which according to Babbie (2010) are adequate for analysis. However, the inclusion/exclusion criteria were those who have lived in the research site for their entire lives and were above the age of 32 years. A total of 40 in-depth interviews were purposively sampled among the community members. Also, purposive sampling for focus group was employed where six focus group discussions were conducted with 48 discussants in total. A total of 15 key informant interviews were sampled by intensity sampling. In this case, specific groups within the community were targeted including elders, mothers, community leaders, traditional healer practitioners and professionals. Additionally, the researcher carried out unstructured conversations with the community members and the host families while taking notes on observations made with an aim to describe practices and meanings undertaken by the El Molo concerning food.

3.6 Data collection methods

The study involved collection of both primary and secondary data. Data collection methods employed was as follows;

3.6.1 In-depth interviews

This was the main method of data collection. These interviews were conducted with forty community members. The interviews obtained both quantitative and qualitative data. The quantitative data entailed age, gender, marital status and occupation, level of education and migration of household members. Qualitative data provided detailed information on the processes entailed from procurement to consumption of different indigenous food systems and their symbolic meanings. The interviews also provided knowledge on hunting tools and their preparations, fishing techniques, culturally acceptable way of slaughtering animals and the rituals that proceeded these occasions and sharing of meat. Additionally, the researcher gathered information on various fish species found within their locus of dwelling, plant species and wild birds that are consumed.

Additionally, information on their traditional ecological knowledge was obtained. Furthermore, the interview gathered information on their current perception of their indigenous food systems and their symbolic meanings as well as changes they perceive in themselves as a result of socio-ecological changes. The researcher had a research assistant that acted as an interpreter. The interviews were conducted in their homesteads and the mode of interviews was face to face where Kiswahili and El Molo Samburu/ Turkana languages were used as medium of communication. The interviews lasted for eighty minutes. With permission from the participants, the interviews were audio-recorded. Both researcher and the research assistant took notes. To generate the above, data was collected using an in-depth interview guide (Appendix II).

3.6.2 Key informant interviews

A total of fifteen key informants were interviewed; elderly women and men, mothers, traditional health practitioners, a representative of Kenya Wildlife and Conservation Management, Deputy County Commissioner, Deputy Director, department of Tourism, Culture and Social Sciences County Government of Marsabit, and the executive director of Gurapau- Community Based Organization. The elderly women and men were selected because of their long histories interactions with their ecosystem thus, they provided detailed knowledge of their local foods, seasonal cycles, and changes witnessed.

Food domain is mostly regulated by mothers hence, mothers gave information on cultural, moral and religious meanings of different indigenous food systems. They also noted changes taking place in the kitchen as they either learn different dietary practices from their neighboring communities or procure food donated by relief food agencies or food bought from the markets. Traditional health practitioners

have comprehension, practices and expertise of indigenous knowledge that is influenced by cultural context. They provided information on different types of indigenous food system and their various uses either in rituals or in healing. Also, provided knowledge on where the specific foods are sourced; they recounted stories of their communication with their ancestors through dreams and visions where ancestors guide them on fishing expedition, what time to fish, methods of fishing and when to go hunting.

Representatives from KWCM and Marsabit County were critical informants because the former provided information on their role in conservation whereas the latter represented government position on the importance of upholding culture in the society. The government representative was an El Molo therefore he provided in-depth insight into his community. The executive director- Gurapau was selected since the organization is well versed with the community. They provided information about the El Molo community; their history, culture, indigenous food systems, changes witnessed and their challenges. The CBO was also helpful in providing unpublished materials on names of different indigenous food systems and cultural artifacts in their original El Molo language. Finally, the district county commissioner was selected also as a government representative. He provided information on conservation and challenges experienced by the El Molo in relation to food and climate change.

The aim of the key informant was to provide expertise knowledge on indigenous food systems, their symbolic meanings and socio-ecological changes witnessed. Interviews with the elders, mothers and traditional healing practitioners the researcher had research assistant who acted as an interpreter. Both the researcher and the research assistant took notes and audio-recorded the interview with permission form the participants. For the rest of the key informants, the researcher conducted interviews on her own. The interviews conducted were face-to-face conversations and English, Kiswahili, El Molo Samburu/Turkana language was used as medium of communication. The interviews lasted for an hour. Interviews took place at the participants' homestead and in the office. The interviews were guided by an interview guide in (Appendix III).

3.6.3 Focus group discussions

Six focus group discussions with a maximum number of eight participants were conducted with homogenous groups of males and females who had lived in the research site until adulthood. This was crucial to heighten the level of diversity in knowledge of different indigenous food systems, notions and interpretations of these notions associated with processes involved from procurement to consumption of indigenous foods and clearing of the work station and experiential knowledge on socio-ecological changes on El Molo indigenous food systems and their symbolic meanings. Additionally, the El Molo are a small population and majority of the populations are young adults.

In each location, two focus group discussions were conducted one for the males and the other for the females and the venue for discussion was in one of the participants' homestead. Discussions were done in El Molo Samburu/ Turkana and Kiswahili. The researcher acted as a facilitator whereas the research assistant took notes as well as audio recorded the interviews with the permission of the participants. Discussions lasted for about one hour thirty minutes. The group comprised of forty-eight (48) discussants in total. Discussions were conducted using a focus group discussion guide in (Appendix IV).

3.6.4 Observation

This method was employed throughout the study and served as a pointer between knowledge and practice. The researcher lived in both villages for a period of one month. All community members were well aware of the researcher's study and they were all pleased to invite the researcher to document activities relating to the study. This method helped the researcher to recount real time detailed account of indigenous food systems symbolism as well use of other foods that are not indigenous but have been incorporated due to socio-ecological changes. The researcher observed and documented activities involving from food procurement to consumption among the El Molo. Similarly, the researcher observed and documented events that took place in the community that related to the domain of food.

The researcher took notes and took photographs with the permission of the community members. Notably, the researcher witnessed the Commemoration of Souls, a tradition practiced by the Catholics. A majority of the El Molo profess the catholic faith. This ritual has been incorporated in El Molo tradition where as the father/priest conducts the service, the community members are allowed to feed their dead. In this case, the El Molo had gallon of liters of milk, water, tobacco and fat from sheep/goat which were in different containers. Each grave was fed with the mentioned items. Also, tobacco was sprinkled on top of the graves. From the observations, this was a sacred moment for the El Molo who believed that the living dead/ancestors need to be feed from time to time so as to keep their relationship intact and for blessing's purposes. For others who had fish, they left the fish on the graves. After the church service was over, the community members were allowed to chant their traditional prayers in honor of their departed relatives.

3.6.5 Secondary sources

Official government publications and books, journals, policy documents, essays and internet sources were used in literature review and background information to the study. These sources acted as a reference material during the entire process of the study.

3.7 Data processing and analysis

The researcher had a notebook, a diary, recorder, laptop and her phone camera that were used in documenting the data gathered. All interviews were recorded by tape recorder also the researcher jotted down notes in her notebook. The audio data was transcribed and where interviews were not conducted in English, audio data was translated and transcribed. Transcription of the data was done verbatim. Additionally, data was analyzed thematically by identifying emerging patterns from the answers given by the participants and generating themes in line with the study objectives. For socio demographic data analysis was done through computing averages such as range, mean and percentages. They were then presented through descriptive statistics in the form of frequency distributions and tables.

For presentation, the researcher used verbatim quotes captured from participants to provide actual feelings and views on the issues under investigation. The researcher also used narrative conversations and dialogs to present the perspectives of the respondents. In addition, the researcher presents data from a historical perspective to give a clear description of the process involved in feeding among the El Molo. To illustrate the processes involved from procuring indigenous food systems to consumption, the researcher provided photographs either taken from the field or acquired from secondary sources.

3.8 Ethical considerations

Before the researcher begun the study, she sought permission from the Institute of Anthropology, Gender and African Studies- University of Nairobi. The institute approved the research proposal then the researcher applied for a research permit from the National Commission for Science, Technology and Innovation (NACOSTI) in the ministry of education which is the national body mandated to approve scientific study. This research was, therefore, permitted under License No: NACOSTI/P/20/5868. Participants were rightly informed on the objective, the target groups, selection procedures, duration of the study, and future use of the research results. An informed consent form (Appendix 1) was signed by the participants as surety of their understanding and acceptance to be involved in the study.

Throughout the study, participants consent was sought to allow for audio recording which would later be transcribed. Additionally, consent was sought on taking photographs of cultural materials as well as their indigenous foods. Furthermore, participant identities were anonymized using pseudonyms. Data access was restricted to authorized people only and strictly only used for the purpose of this study. The rights of the participants to drop out of research study at any point were explained; however, due measures were taken to encourage full and informed participation of the participants in the course of the study.

As part of academic and ethical considerations, the study findings will be disseminated in a number of ways. One way will be to publish a book chapter or a journal article. This will provide fellow scholars and other professionals interested in the study findings to have a chance to comment and provide feedback. Another way will be to share a copy of thesis with the University of Nairobi library and County Government of Marsabit. The researcher aims at producing pamphlet of the findings in a simplified version for the community and the county government.

CHAPTER FOUR

PRESENTATION OF FINDINGS

4.1 Introduction

This chapter presents findings of the study on; El Molo knowledge of their indigenous food systems, symbolic meanings the El Molo attach to different indigenous food systems and the impact of socio-ecological changes on El Molo perception of their indigenous food systems and their symbolic meanings. The chapter first presents the demographic and background characteristics of the respondents. Then the chapter presents the findings on the specific objectives.

4.2 Characteristics of the respondents

Among the context attributes encapsulated were age, gender and marital status, level of education, migration of household members and occupation of the respondents. Age is an important index on the level of expertise on indigenous foods. Also, it is one of the factors that determine position of leadership when it comes to food procurement, preservation, preparation, presentation and performance. Marital status influence food availability as well as norms that govern the processes involved in meeting food requirements while occupation is important in regard to the scope of interaction with their environment.

In the case of occupation, the intention was to capture indigenous knowledge pertaining indigenous food systems. Where migration of household members determines if the respondents still consumed indigenous food systems, level of education was an important indicator showcasing if these group of people still held the same beliefs and values associated with their indigenous food systems. Gender was one of the variables that was important in the study because gender determines different roles and responsibilities of each sex. Table 4.1 summarizes the number of men and women who were interviewed for the in-depth interviews.

Gender	**Frequency**	**Percentage**
Females	25	62.5
Males	15	37.5
Total	**40**	**100.0**

Table 4.1: Distribution of the respondents by gender

Age and the years the respondents had lived in the research site was an important aspect of the study since one of the objectives was to analyse El Molo's knowledge of their indigenous food systems. The age of the respondents determined knowledge associated with indigenous food system as well as socio-ecological knowledge. Table 4.2 summarises the information regarding the age of the respondents. As Table 4.2 above shows, the respondents ranged in age from 32 to 80 years. The age difference was

greatest among women compared to men. The oldest woman was aged 82 years while the youngest was 32 years old. For the men, the oldest was aged 78 years, while the youngest was aged 35 years old. On marital status, the summary is presented in Table 4.3.

Table4.2: Frequency distribution of the respondents by age

Age group (in years)	**Frequency**	**Percentage**
30-40	2	5
41-50	8	20
51-60	12	30
61-70	9	22.5
71-80	7	17.5
80 and above	2	5
Total	**40**	**100**

Apart from age, the marital status of the respondents was also important. As Table 4.3 indicates, a majority (85%) of the respondents were married while (15) were widowed.

Table 4.3: Marital status of the respondents

Marital status	**Frequency**	**Percentage**
Married	34	85
Widowed	6	15
Total	**40**	**100**

The study also sought information on the level of education of the respondents. As Table 4.4 below indicates, minority of the respondents (12.5%) reported having higher education. Respondents with secondary education were (15%), while (35%) reported having primary education. Those who did not have formal education were represented by (37.5%). Respondent's level of education was tested to understand their dietary behavior in terms of indigenous food systems. Nearly all of them had retained some aspects of their indigenous food systems whereas a few had totally changed their indigenous dietary behavior.

Table 4.4: Level of education of the respondents

Education level	Frequency	Percentage
No education	15	37.5
Primary level	14	35
Secondary level	6	15
Higher education	5	12.5
Total	**40**	**100**

As Table 4.5 below indicates, a majority of the respondents (85%) have lived in the research site all their lives while (15%) had migrated to other regions of the country. The focus on migration of the household members was necessary in order to comprehend if they still retain their indigenous food

system practices or if they have incorporated other ways of practices learned from other surrounding communities.

Table 4.5: Migration of household members of the respondents

Response	**Frequency**	**Percentage**
Permanent residents	34	85
Migrated to other regions	6	15
Total	**40**	**100**

As table 4.6 below shows, a majority of the respondents (70%) derive their livelihood from fishing. The respondents supplement their livelihood by weaving baskets, mats and beading necklaces and anklets. The respondents also rear goats, sheep, chickens and wild birds. Other respondents (12.5%) are self-employed working as motor cycle operators, shopkeepers and artisans. Others engage in small scale trade by selling food. Only (10%) and (7.5%) of the respondents are in formal employment that is; public sector and private sector respectively as shown in Table 4.6.

Table: 4.6: Occupation of the respondents

Occupation	**Frequency**	**Percentage**
Fisher/ Hunter/ gatherers	28	70
Public sector	4	10
Private sector	3	7.5
Self-employment	5	12.5
Total	40	100

The knowledge of indigenous food systems has to do with the occupation of the respondent. The respondents have different occupations as elders, grandmothers or grandfathers, mothers/fathers, community leaders and professionals. Some of the respondents have overlapping roles when it comes to performing rituals. In regard to gender roles, men are allocated duties in fishing in the deep waters, making and preparation of hunting tools and organizing the hunt. Also, grandfathers and fathers teach young boys the techniques of fishing and hunting. Young boys are socialized in fishing and hunting where they accompany or observe from a distance when these activities are taking place. Additionally, the boys play games imitating the animals and the hunters.

While playing, a fraction of boys become the hippos, crocodiles and turtles and the rest are hunters. The hunters approach the ‘animals’ carefully where they pierce the right places of the ‘animals’ using blunt objects. Significantly, men are in charge of performing specific rituals based on their clans, they also cook outside their village. Women and girls dominate household management. Grandmothers and mothers are the primary transmitters of household activities also, gathering of wild fruits. From the study findings it is a taboo for menstruating women to cook or to touch utensils that might be used by a male. Also, menstruating woman is not supposed to eat using her bare hands; she is either fed or eat

using the spoon (fish bone). Additionally, she is not allowed to bathe so as not to pollute water. The domain of cooking, serving and cleaning of the work station is the woman's responsibility. According to one of the participants; a female aged 72 years;

> *Women are tasked with taking care of their families. Therefore, it is the duty of the men to go fishing and hunting to provide for their families. Women only fish to supplement what the man brought. For men, they only cook for themselves while in the wilderness for too long especially during hunting (Female, 72 years, Layeni, KII).*

This perspective was corroborated by another participant thus;

> *It is our duty as men to provide for our families. This is what we were taught by our fathers and grandfathers (Male, 55 years Komote, KII)*

The study reveals that some of the tasks involving indigenous El Molo food systems are performed by both genders like gathering of wild fruits and procuring fish along the shores of Lake Turkana. Women in some cases are allowed to slaughter goats/sheep, small crocodiles and turtles and prepare them for consumption. Both genders are well-versed with information and knowledge of their ecology as well as their indigenous food systems. They know where to fish in plenty. During a focus group discussion one of the male a fisherman aged 65 years said;

> *My grandfather taught me zones to target during different seasons all-round the year for bountiful harvest. For seasons where there are strong winds, my grandfather and I would travel and camp in Kaldera where we fished for some time, before heading back home with our harvest.*

From the study findings, men are more versed with information and knowledge of fish species and their characteristics since they fish in the deep waters. They also have the knowledge on the distribution of fish species in the area. One of the male elders from *Lmarle* clan aged 76 years said;

> *My essence knows the lake because my ancestors were here before me. In this lake, I can close my eyes and direct you where to go fishing depending on the seasons of the year and directions of wind blowing.*

Generally, the study findings indicate that El Molo knowledge about their indigenous food systems and ecological knowledge is contextualized through practice and experience. This knowledge is transmitted generationally through apprenticeship, storytelling, ceremonies, ideologies, hunting/ trapping, food gathering, preparation and storage, beliefs, spirituality and medicine. Also, the El Molo pay deifies and reify to their ancestors as an important aspect to cultivate kinship and continuity of their identity. Various rituals are conducted including regular symbolic feeding of the ancestors to keep the ancestors happy who in return bless them. The ancestors are regarded as beings that take an interest in El Molo affairs and possess the ability to influence their fortune.

In regard to religious affiliations, all respondents reported being Christians. Majority of the Christians follow the mainstream churches the Catholic, while a minority belongs to Christ Is the Answer

Ministries- CITAM and the African- Initiated Church- AIC. The influence of religion is apparent in the respondents' descriptions and declarations of ecological changes. Thus, Christian beliefs are interlinked with indigenous beliefs to portray local perceptions of their indigenous food system symbolism and meanings.

4.3 Indigenous El Molo food systems and their symbolic meanings.

The study revealed that Lake Turkana is very sacred among the El Molo community as it is their major source of livelihood. The respondents gave historical accounts that preceded the hunting of hippos, crocodiles, turtles, fishing various types of fish species as well as gathering of wild fruits and consumption of wild birds. According to El Molo elders, all these types of food are acquired uniquely and have different ways of preparation, cooking, serving, eating and clearing of the work station. Acquiring some of these foods involves rituals and a lot of preparation. The elders noted that all their rituals are conducted in the appearance of the full moon and their day culturally ends at midday.

4.3.1 Hippo hunting

For the El Molo people, hippo is an important source of food that is held in high esteem. Referring to the narration from the respondents, hippo hunting is a task that is deeply rooted in the El Molo culture and this type of hunt takes place in two occasions namely; *Nyakirim* and *Njore*. The difference between these two types of hunt is one is meticulously planned with rules and regulations and is conducted only once a year (*njore*) while the other is unplanned (*nyakirim*). One of the male key informants in Komote village aged 78 years who had participated in several *njore* hunts describes *njore* hunting in the following manner:

> *In njore hunt, El Molo men set a meeting to discuss the need for a njore. After the meeting, discussions are tabled to the elders. There are four top elders who are involved in this type of discussion known as (Arapile) who debates and make decisions on njore hunt before involving other elders to deliberate on their discussions.*

According to him, when the elders reach consensus they all meet to discuss about the journey. Issues like the distance covered in travelling, the period spent out in the wild hunting, a place to stay during this period and the day set for the journey are discussed. After the discussions, men start by preparing their hunting equipments (*domote*). In this type of hunt, there are rituals performed at the sacred site- Lorian Island where the elder performing the ritual is a member of *Orikara* clan. Each moiety (*Korchir and Marsara*) organized its own *njore*. According to the respondents, this is done interchangeably, if *Korchir* conducts one *njore*, the next one would be *Marsara*.

Purity of the body is emphasized for all the men who set out to participate in *njore* hunt as it is believed that sleeping with a woman attracts bad omen. In the appearance of the full moon, all men gather in one of the elders' homestead, where they sleep and leave early the following morning to Lorian Island

where prayers are conducted then they proceed with their journey. This type of hunt has a leader who is an expertise in hippo hunting and who also selects men who are eligible to go for this type of hunt.

Hippo hunting is either done inside the water or on land. On the latter, when hunters spot the hippos while grazing, they surround them and forge towards them and focus on one hippo which is pierced. The hunters move against the wind while approaching hippos so that the hippos do not notice them. Whereas, in the former, when men spot a hippo in deep waters; where they know it is dangerous to go there, they select one hunter who is a great swimmer and a partner who follows the main hunter to help him. The elderly man pointed out that in order to understand hippo hunting, it is important to consider the hunting spear since this equipment has various sections which serve different purposes. He described the hippo hunting spear in the following manner:

> *There is a thick stick known as 'toor' that is sourced from the root of acacia tree. Men search for acacia tree, pierce the ground where the acacia tree is planted, if the pierced ground produced a 'ku' sound, then there is a root there covered by soil. Then, the men dig the root not to the deep but the root that is lying in a straight manner (horizontally). The root is followed up to the end and the part attached to the tree is cut. If the root is bend, oil is applied to the stick once the man got home then it is passed through the fire to straighten it. The root is soaked for a day and the skin is removed. The skin is braided by twisting it on the lower thigh to make a rope.*

According to this elder;

> *When braiding is done, this rope is stretched and then left to sun dry. This rope is called unuf and is s tied to a piece of metal called (sengei). The metal is used to pierce hippo.*

Then, there is an antelope horn (*teker*) that is used to merge both the weapon and *toor*. The antelope horn edges are cut and the middle part is used to connect the two together. The connection is done using fire. The middle part that is round in shape, hollow inside in a way that on one end *toor* slides in and fits perfectly while the other part fits the handle of the weapon; only the piercing part of the weapon is left exposed. Then, there is a rope that is permanently tied to *toor* about four (4) centimetres from the other end (not the piercing end) called *ante*; some stretch of the rope is left to tie together both *unuf* and *saala* rope to tighten it and make it strong. *Saala* rope is made from *doum* palm fronds; the doum palm fronds are mashed until they are soft and then they are left to sundry for about two hours.

The rope is made by weaving three threads of *doum* palm fronds. While threading, a little bit of water is added to aid the process. *Saala* rope is said to be very strong. About four (4) centimetres to the end of *saala* rope there is *pilato;* this is a round shaped wood used to connect other ropes of the hunters. Once a hippo is pierced, then the hunters in quick succession tie their ropes around *pilato* and tie a nod at the end of the rope again to avoid slippery and breaking of the rope and all the hunters together pull

the hippo in shallow waters. Women are tasked with rope making while the men assemble and make the hippo hunting spear.

Below is a song that is sung in praise of the hippo hunting spear.

Hippo weapon song (njagute)
Nagute gutei-e-tirim njagute×2
Adifaano njagute×2
Gutei-e-saala njagute×2

Njagute is the sharp end of the weapon, *tirim* is the body part of the weapon, *adifaano* is the whole weapon and *saala* is the rope attached to the weapon.

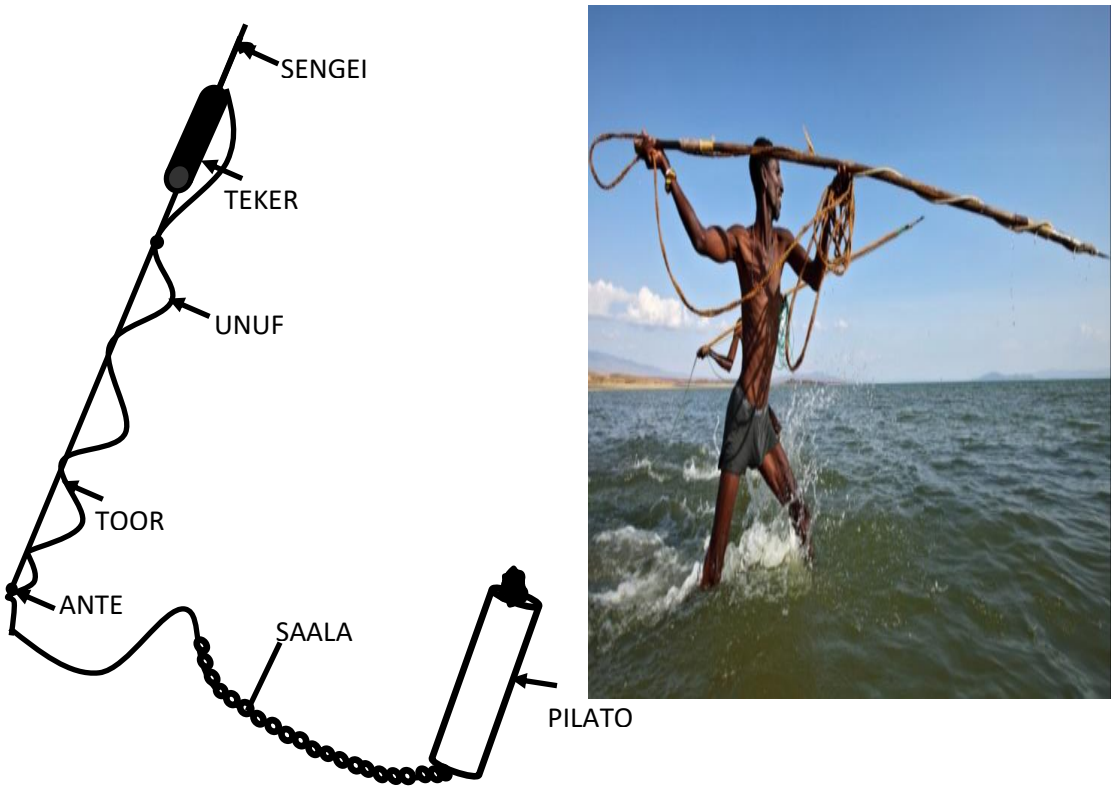


Plate 2: Emolo Man hunting with a spear, illustrating how hippos were killed; Source*:* www.chicamod.com.

Plate 3: Sengei - The sharp metal that pierces hippo; Source: Author, 2023

The elderly man continued with his historical accounts of how hippos are hunted in deep waters as captured in the narration below:

> *Hunting hippo, here a case of deep waters, the main hunter and the helper dives in the waters and the hippo is approached in a cunning manner; men always travel against the wind and the only body part that is visible is nostrils to the top of the head. The main hunter ties a section of saala to the waist (α- in such manner so that it is easily loosened once the hunter pierces the hippo). If the hunter succeeds in piercing the hippo, then the saala that is tied in a loose manner around the waist instantly unlatches itself and each hunter passes their saala ropes to each other tying (making a node and tying them to pilato) as quickly as they can and together the hippo is pulled to the shallow waters. Once the hippo is pulled to the shallow waters, the rest of the men use their spears (domote) to spear the hippo. There are specific parts of the hippo that are to be speared; the hip (upper part of both back legs), then the right side of the ribs close to the heart.*

Plate 4: Elmolo hunters showing specific areas to pierce and injure hippo fatally; Source: www.alarmy.com

According to the elderly man, rituals begin immediately once the hippo is confirmed dead. First, all weapons that speared the hippo are removed and then the men break into a song called *seur*. Below is the *seur* song;

> *Eeeeiawoyayeiyaiwaya (the start of a song)*
> *Palkuteesiasuralakapale (Mt. Moite mountain of my grandfather and its soil)*
> *Otimiridosurapalkateya (doum palm found in Mt. Moite)*
> *Naawamatengoitite (Dreams of my uncle dreaming of killing you, hippo)*
> *Maeaititamuro (Uncle tells me it is accomplished)*

The elderly man could not sing some of the hippo songs. These songs are considered sacred and singing them without a proper context attracts bad omen. The narration continued:

> *From here, the hippo is rolled out of water into the land. The hippo is pulled not far away from the lake (it is normally rolled in about 100 metres from the lake). Then, the hero who killed the hippo mounts on top of the hippo sits on its chest and formulates songs which are echoed by other hunters present. The hunters sing for a while then the hero descends. If the hippo is killed past noon, the hunters wait until the following morning to start slaughtering the hippo. During this time, the dead hippo is guarded by few hunters so as not be eaten by crocodiles*.

Plate 5: The main hunter and the helper pull a dead hippo out of the water; Source: Ismael, 2022.

Plate 6: Hero sits on top of a dead hippo in celebration of the kill; Source: robertofaidutti.photoshelter.com

According to El Molo traditions, the elderly man pointed out that there are various parts of the hippo meat that are to be cut first. Hippo is slaughtered in the following manner:

> *The first part to be cut is called tungurach- this is the fat around the ribs on both sides. The cutting begins from the lower side of the right side to the upper part of the right side and the same process applies to the left side. Tungurach is put on fire immediately to cook. The second part to be cut is saiwe. This is the upper layer of the chest. Before removing the whole saiwe, a ritual is performed. The hero chooses one of his fellow hunter, picks some mud within the slaughtering vicinity and then the hero and his chosen colleague smears each other with the mixed content of mud and blood at the same time on the same body parts- starting from the centre of the forehead to both shoulders and the upper part of the chest- like making a symbol of the cross sign. Once this is done, saiwe is removed. Saiwe is*

specifically for the hero. The hero cuts saiwe in thin long strips and takes it to their camping space where he spreads the meat to sun dry.

Plate 7: El Molo cuts hippo with spear*; Source: Ismael, 2022*

Plate 8: Elmolo men butchering hippo while the saiwe is cooking: Sources: Ismael, 2022.

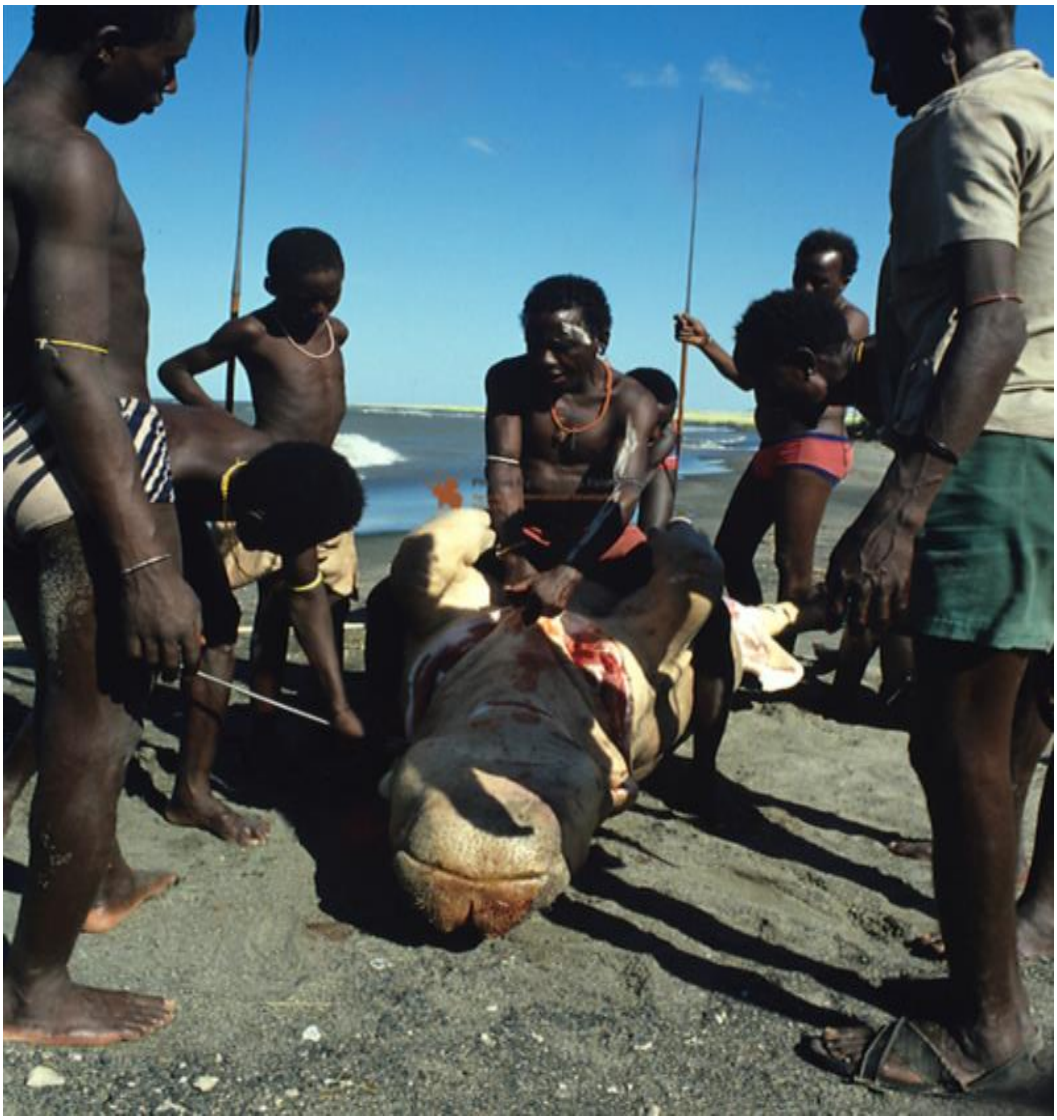


Plate 9:Elmolo men conducting a ritual; Source: robertofaitdutti.photosheter.com

From here, the hippo is slaughtered according to El Molo customs. There are some specific parts that are to be cut and set aside. These parts were; *Kaale*- chest of the hippo, *yerpo*-diaphram, *saalate*-duodenum, *koi*- rectum (from rectum to large intestines), *meere*- small intestines, and *gulach*- hips of the hippo. At the end, ears (*neppe*), tail *(yeauu),* and frontal tip of the tongue *(reep)* are removed. All these three pieces are tied on a rope and given to the hero who place them where he had put *saiwe*. Once these parts are removed, the hunters divide the remaining part of the hippo meat amongst themselves. They cut the meat in thin long strings then the meat is left to sun dry.

Plate 10: The trophies which consist of ears, tongue and tail being removed from dead hippo*; Source: Ismael, 2022.*

Plate 11: Hippo meat is cut; source: Ismael, 2022.

The meat is usually cut into thin long strips and is laid over brushwood to dry in the sun. Latter it is wrapped up in reeds and transported back to the village. This is a method of preservation. This process is summarised in the narration from the elderly man continued in the following manner:

> *The removed parts are supposed to be kept so that they can be taken back home (miin). On their journey back home if the hunters had not had a catch that day, each one of them contributed a share of their meat which is cooked and shared amongst themselves. Also, the small part of the hippo stomach is cleansed (it is said that a hippo has several stomach) cooked and fat is stored inside it, then it is left to cool down. This is eaten on their way home or if they have no other food. If they happen to fish, the fish is cooked and consumed together with warm pieces of the stored fats. After the slaughtering process is concluded, by then tungurach had cooked and was ready for consumption. The method for cooking*

tungurach is by boiling. Tungurach is eaten the whole day; before the sunsets and the hunters have eaten to their full, the leftovers are thrown into the lake.

In view of the foregoing, the El Molo elder noted that the hunters often go on a hunting expedition for long periods of time and only return home if they are satisfied with their hunt or if they receive bad news from home. During their stay in the wilderness, they kill several hippos. Once the hunting expedition is deemed successful, the hunters set out to go back to their villages. While approaching their villages the hunters break into *seur* song at a distance close to the village to alert the villagers of their return. The community members gather outside their *miin* to receive them. Generally, all the hunters are celebrated by the villagers. The hero is adorned with *rarak* (a necklace made from ostrich eggshell beads) at the neck to symbolize his heroism.

Also, other hunters are adorned with necklaces to welcome them back home. The hunters carry the preserved parts of the meat to their respective households. If the hero is married his share is given to his wife, but if not, it is given to his mother. If the hero's mother is dead, then it is taken to the aunt (sister to the mother). There are other rituals that are conducted once the hunters are received.

First thing to consider are the contents that were attached to the string; ears (*neppe*), tail (*yeauu*) and frontal tip of the tongue (*reep*). These contents are tied to *toor* and the *toor* is placed at the entrance on the right side of the house (the hero's house). It is left in an upright position for a whole day. After which *saiwe* is also brought inside the house and hanged on the right side of the house. After this, *ngulach* is immediately put on fire to cook by boiling. This is done either by the mother or the wife depending on the marital status of the man. On this particular day only *ngulach* is eaten by family members of the hero or if the man is married it is eaten by family and in-laws. The following day at noon, small intestines *(meere)* is fried.

Only men are allowed to consume this *meere* (fat and the dried meat). Men consume this fat the whole day, once full they take a rest then come back and take more, this process is done repeatedly but before the sunset the leftovers are thrown into the lake. The same day of *meere* consumption some men are selected or volunteer to go fishing. Tilapia is the most preferred fish from the catch. *Saiwe* is cooked with tilapia by boiling. The common knowledge is that *saiwe* cannot be consumed on its own because it contains lots of fat. As the cooking proceeds, men sing the *seur* song. When food is ready, the hero is the first to test the meal before serving the rest.

According to one male respondent, if the hero is a *Korchir* a *Korchir* member serves the food. According to him:

The Korchir man has to be an elder and the biggest share is given to Marsara this ritual is the same if the hero is a Marsara, then Marsara elder serves the food and the biggest share is given to Korchir. This food is eaten and a portion is preserved for elderly women who would eat their portion the following day. If the women eat to their fill and there are leftovers on this particular day, the leftovers are thrown into the lake. This same day, the string and its content- ears, tail, and the frontal tip of the tongue are untied from toor and it is brought inside the house and hanged where saiwe was hanged the previous day.

On the third day, cooking of *koi* takes place. *Koi* is specifically for the hero and his family. The method of cooking is by boiling with water. *Koi* is said to be very huge; sometimes it is cut into three parts, one part is put on fire to cook, once ready, the top layer which is fat is separated from the water that is at the bottom, then the second part is again put inside to cook. This process is repeated until all divided parts are cooked. After the last part is done and fat separated from water which is then cooked into a thick soup; the soup is continuously stirred to thicken more and acquire a delicious taste. Then, the meat, fat, and soup are all consumed by the family; if they eat to their full, then they call their fellow community members to join them. According to tradition, this meal is supposed to be finished, but if it happened that there are leftovers, before the sunsets the remains are thrown into the lake.

The following day *saalate* is cooked with fish- prefer tilapia. The fish might have been caught at night or in the morning. Only men are allowed to eat this meal. This food is eaten the whole day and the leftovers are thrown into the lake before the sunset. Additionally, *Yerpo* is cooked alone by boiling. It is small and is eaten by men only. *Kaale* is also boiled with tilapia. It is commonly made for soup which is consumed by men. Men skin the meat and give it to the women then; men collect all the bones and throw them into the lake. The only part that men do not eat is the tongue which is cooked by boiling and consumed by women. A boy chid eats what the male consumed while a girl child only eats *kaale* and what is eaten by women.

Likewise, the elderly man noted that throwing all the leftovers in the lake is an indication that their blessings come from the lake and in return they too feed the lake. This is also the reason why hippos are killed in the lake. Their belief is, if they do not throw the leftovers in the lake; the lake will cease to give them hippos and the hero will be subjected to severe consequences as a result of them not following the right procedure. According to the men's focus group discussions in Layeni village, if a *Moeere* has never participated in hippo hunting, he had to undergo a specific ritual considered as receiving an oath for a successful hippo hunt.

On the same note one male in the focus group discussion observed;

When it is nyakirim season, and it is the first time for a Moeere to participate in this kind of hunt, an elder from Orikara clan (in the absence of this elder, then Orgargito clan presumes the role). The elder and Moeere sit straight facing each other and then the elder scoops hippo fat/oil (meere) using ostrich feather that is grey in colour and then he drips the oil on the palm of his hands. The elder proceeds to

rub both of his hands together and he opens his palms spit on them and mix both saliva and oil. After this, the elder scoops this mixture of oil and saliva and proceeds to make a cross sign on the forehead of the Moeere. It is only after this ritual a Moeere is considered a hunter who has received blessing to participate in any kind of hippo hunting.

The male elder aged 72 years pointed out that there is a song sung to a *Moeere* who has never participated in hippo hunting to boost his morale and to be brave enough to take the initiative and participate in the hippo hunt. Below is the song;

Ng'ai echori ngiringo naremo ooye (who is to be given the meat that has been speared)
Kechori ngotoye igureti ooye (should be given to the cowards' mother)
Peaku ngutuk ipule (so that their mouths would be bloody)
Loriri ngutuk lai ooye (my roughly mouth)
Lodongwe ngutuk masa ooye (that eats reeds [masai])
Loyere ngorung senge ooye (that it's back fit to be speared)
Kejo layenu lataanywa ooye (the brave one say)
Lpirukat ekenu ltolut ooye (it always finds its way between them [cowards])

Referring to the narrative from the elderly man, sometimes the hunters are unsuccessful during their hunting expedition. A person who misses to pierce the hippo is given a name (*ketite*) - meaning someone who missed the target, as everyone had great hope on the hunter. The next time a hippo is killed, the rest of the hunters would torment the hunter who missed the target. This is done in *njore* but not in *nyakirim*. To this end, the El Molo men expounded that sharing of hippo meat in *nyakirim* is similar to *njore*. The only difference is the sacred songs that are sung during *njore* hunting are not sung in *nyakirim* hunting. The only song sung is *seur* song. Also, *tungurach* is brought home to be cooked unlike in *njore* where it is cooked in the wilderness.

For the El Molo, according to some male respondents, a bone earring made from cow ribs is worn by the hero to symbolise heroism. These earrings are made from cow bones acquired from neighbouring communities since hippo bones are hard to break. The earring is either worn on the right ear or both ears according to the clans. For *Orikara, Lmarle* and *Origargite* they wear earrings on both ears while *Origaya, Origargito, Orisole* and *Orisayo* wear the earring on the right side. If there is wear and tear of the earrings after sometime the hunters/elders embark on making new ones. It was also observed that old men still wear these earrings a reminiscent of their past. Where in the past these earrings were a symbolism of pride, today they do not have any meanings apart from other old members who decode the meanings of those earrings. From the researcher's observation, the elderly men narrated hippo hunting expedition with pride beaming on their faces but their voices betrayed them.

At some point, when they explain that the last hippo to be hunted was about 40 years ago, their voices lowers, then their faces sulk and their eyes looks at the vast lake that its waters are rising day by day encroaching their spaces, the strong wind blowing seems insignificant; all of a sudden you can hear a

pin drop because of their abrupt quietness. The elaborate description of how hippo is hunted to consumption may be attributed to linkage between culture, language and cognition. In the words of one of the elderly man aged 77 years from Komote, restriction of consuming this indigenous delicacy could be summed up thus:

> *Hippo is our royal food. It is our pride as it has been a source of food for us since time immemorial. We have had and still continue to have good relationship with this animal. Hippo makes us whole. We are empty without this animal being part of our lives. Our days are full of sorrows because our culture is eroding. In the past our men were very strong since they used to consume hippo meat, soup and fat. Hippo blood acted as medicine that healed chest problems. Today, our men have small statue, are very weak and prone to diseases. This is because they do not eat hippo meat, soup and fat neither do they consume hippo blood. We are left to recount stories of what once held us together*.

Chiefly, the El Molo male respondents attested that this knowledge will not be available in the near future as old men die and there is no way of transferring this knowledge since the Government of Kenya allows the El Molo to hunt one hippo yearly. This has remained a pipe dream for the community since hippos have moved further away from where they reside.

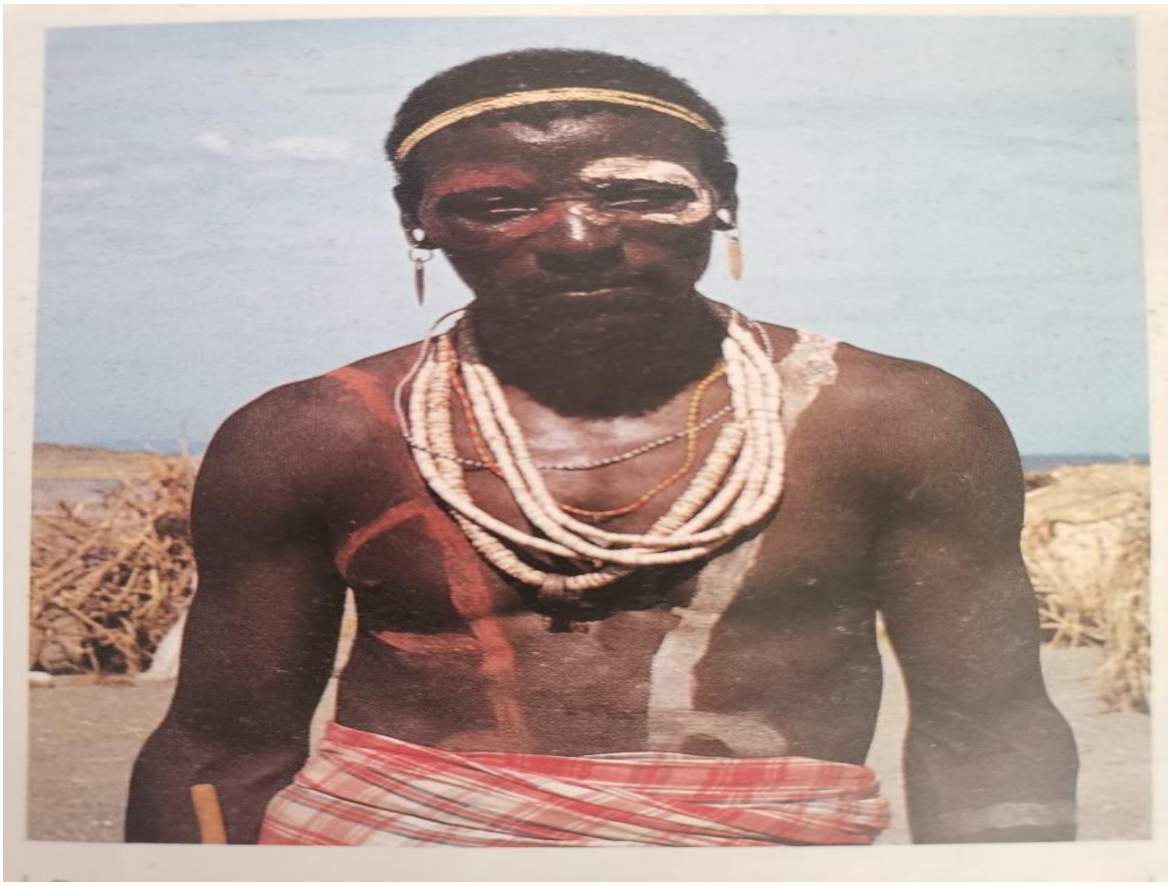


Plate 12: Elmolo hero adorned in full regalia after returning home from a successful hunt. Source; (Consolata Fathers Booklet- Nairobi, Kenya)

4.3.1Crocodile hunting

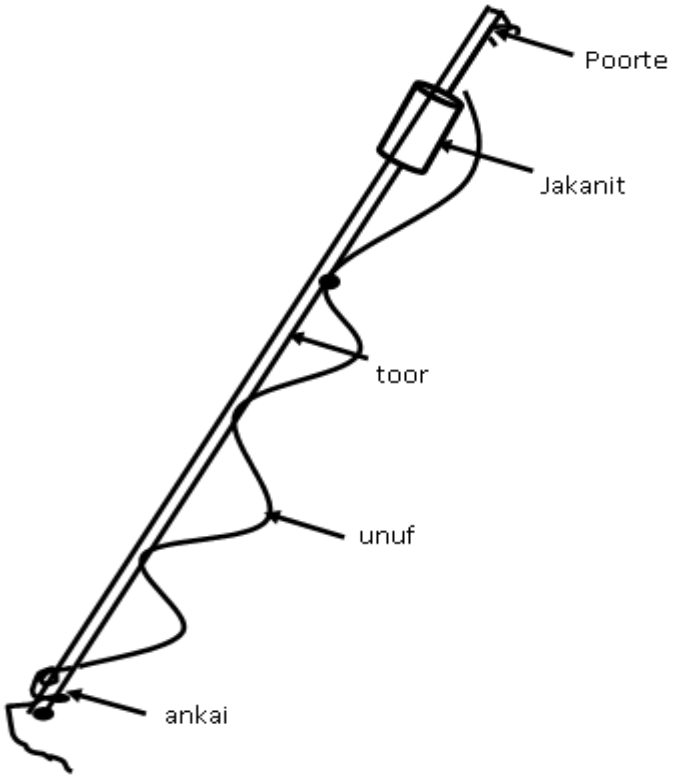
On the other hand, the study findings indicate that Nile crocodile (*nyaud*) and turtle (*ngumaate/logweeri*) is consumed like any other foods among the El Molo. Consumption of these two animals is a refreshing addition to the monotonous fish diet of the El Molo. From historical narration, the participants from key informant interviews noted Nile crocodiles are either hunted inside the water or on ground while basking in the sun. Occasionally, immature crocodiles are speared on rafts while out fishing whereas hunting larger crocodiles required a skilful hunter. In order to understand what it entails to hunt crocodile to its consumption, a key informant male aged 60 years old described crocodile hunting spear. The spear is different from hippo and turtle/fish hunting spear. The description of crocodile hunting spear is described in an excerpt below:

> *There is a stick (toor) that is attached to the metal equipment (poorte) that pierced the crocodile. The edge of the stick about four (4) centimetres where the weapon is to be fixed is sharpened and then a sizable wood from acacia tree root (argapite) is cut and pondered while still wet. One of the edges is pondered to look like it is almost completely loosening this part is called (jakanit).*

According to the respondents, loosened *jakanit* is supposed to joined together with the sharpened part of *poorte* (it's like inserting the sharpened *poorte* part inside *jakanit*) and these parts are tied together using a string called *akat* (this *akat* is similar to hippo rope-*ante*). The other edge of *jakanit* is pondered but not too much so that another *akat* is tied to the front end. Once this is tied, then it becomes permanent. It may be replaced once it becomes old or if a crocodile chews it during a hunting expedition. The weapon is usually tied to *unuf* (a strong rope made from acacia roots) and this is joined with *ankai* (similar to *saala* in hippo hunting).

In addition, another respondent provided a description of how large crocodiles are hunted while on ground in the excerpt below:

> *It is hard to kill crocodile. Two individuals are advocated in this type of hunt. But if one person is brave enough and strong, then this person can go alone; though, it is not recommended for security reasons. Crocodiles are hunted along the shores of the lake. Normally, it is natural for the crocodiles to come out of water at some point during the day and bask in the sun. Crocodiles are known to like places that are completely quite (they do not like noise). While basking in the sun, either sleeping or just enjoying itself, the hunter who is on a hunting spree notices the crocodile from a far off; he gets inside the water, then he submerges himself in water up to nostrils, only from the nostrils to the rest of head part is not submerged in water. The hunter trails the crocodile from the back.*



In a men's focus group discussion, it was pointed out that the hunter and the crocodile must be facing the same direction for the hunt to be successful. And while at it, the hunter must be careful about the wind direction because crocodiles have strong sense of smell. They also have very sharp eyes. The hunters must tread carefully and makes sure that the crocodile does not notice them. Once the hunter gets closer to the crocodile, he makes some noise which rattles the animal making it to scamper for safety. By this time, the crocodile runs in any direction to protect itself and then the hunter follows swiftly and spears the crocodile anywhere apart from the head.

The specific parts that should be speared for an experienced hunter are the joints or the back of the neck. According to the one of the participants, these body parts can easily be penetrated by the spear. Once the lead hunter spears the animal, the helper joins in and spears the back of the neck. If the helper is inexperienced in terms of knowledge about killing the crocodile, he passes his spear to the main hunter who kills the crocodile by spearing it at the back of its neck. In most cases, the helper is the one who kills the crocodile because he is the one who pierced the right places but the first hunter is considered as the one who killed the crocodile.

Plate 13: Elmolo hunters approaching a crocodile, note their bodies are completely submerged. The same method is used to hunt hippos in deep water; Source: Rotman, 2013 in (www.alarmy.com)

The male respondent from key informant interviews further elaborated how crocodile meat is shared in the excerpt below:

> *Once the crocodile is confirmed dead, the hunters cannot claim the ownership of the crocodile. The crocodile is transported the back in the village where the elders are called to cut their share then, the rest of the carcass is divided between the hunter, the helper and a portion is given to other people in the vicinity. Crocodile meat is shared in this manner; the elders take their share which is ribs from both sides (right and left side) the middle part of the tail-crocodile tail is long, huge and large. The middle part is from about four (4) centimetres from the hip joint at the back and the other side is before the end tail. The hunter is given the end part of the tail, the neck and the upper part of the beginning of the tail (kartupet) while the helper is given the tongue, intestines, and the lower part of the beginning part of the*

tail called nyarda. The elders skin meat on the middle part of the tail and give the helper bone for soup, inside the intestines there is kal which is said to be just fats this is also given to the helper. The most end part of the tail (eew) is cut and thrown to the lake as a sign of gratitude to the lake to continue supplying crocodiles for the sustenance of the community. The meat shared is to be consumed by the family members of the people involved. Women consumed the four legs of the crocodiles. The crocodiles' head is kept in a cave, a safe place and is left to decompose. When the head started to decompose, women visit the cave and remove the crocodile's teeth which are used to make ornaments for beautification.

Plate 14: Elmolo man and son hunting crocodile; Source: Ismael, 2022

Plate 15: Elmolo man lifts a dead crocodile from the water; Source; Ismael, 2022

Plate 16: Elmolo man prepares crocodile as children watch; Source: Ismael, 2022

Plate 17: Elmolo woman prepares juvenile crocodile according to custom requirements; Source: Ismael, 2022

Plate 18: Children watch as their mother prepares juvenile crocodile; Source: Ismael, 2022

From the focus group discussions, it was noted that it is taboo for *Lmarle* and *Orisole* clan to eat crocodile. While *Orgargito* clan eat crocodile meat, there are rules to be followed and restrictions to be

observed. These groups of people do not tamper with crocodile meat; meaning it is taboo to touch any body part while eating this meat and if emergency occurs and one has to touch something else, the person washes their hands thoroughly. If the crocodile meat drops on the ground, it cannot be picked. These rules and restrictions are strictly observed. It was further pointed out that crocodile meat is cooked by either boiling or roasting. There are no restrictions on where consumption of crocodiles happened. Crocodile soup is said to have medicinal values. One of the male respondents aged 58 years old said;

> *Crocodile soup is used to treat various diseases. It treats backaches, bones and all sexual diseases. For me I was cured of gonorrhoea by regularly consuming this soup*.

Today, it is illegal to hunt crocodiles. From the focus group discussions, the respondents said they may consume one crocodile once in a while although this is done under high secrecy for fear of being reported to the local authorities.

4.3.2 Turtle

The study findings indicate that turtles (the soft shelled *tyionyx triumgris- ngumaate/ logweeri*) are hunted when opportunity arise. From the in-depth interviews, one male aged 45 years old describes turtle hunting in the excerpt below:

> *We usually identify turtle breeding grounds around the lake. Hunting turtles requires patience as it can take three to four hours to bait them or pierce them. They can either be caught using fishing nets while fishing, use of baited hook or females are killed while seen on the offshore of the lake during the breeding season.*

If a turtle is seen on the offshore, the person grabs its legs and turns the turtle upside down and then it is spear on the chest. In the case of use of baited hooks to trap the turtle, it is recommended to use tilapia meat. The hook is thrown in a marked area known as the breeding zone and the person waits. If the hook is lifted and the hunter notices some dirt on the meat part then, the hunter knows there are turtles around. The hunter then lowers the hook to the same place and waits. Once the turtles start moving, they eat the meat and they are trapped by the hook. The hunter continuously baits while pulling the turtles offshore and kills them. The El Molo belief is that once you bait one turtle, then you will bait more consecutively. One respondent also described sharing of turtle meat in this manner:

> *The hunter is given the neck, two pelvic bones at the back and gine (tip nexus to anus) is given to the hunter's mother. If the mother is dead then, the share is given to the aunt-the mothers' sister. The present people that are around during fishing are given the four legs and the intestines. For the Lmarle and Orisole clan, they do not eat turtle or use fire used to cook turtle or touch any utensils used to either cook or serve turtle meat.*

Plate 19: Elmolo man lifts a soft-shell turtle (trionyx triumgris); Source: Ismael, 2022

Plate 20: Upper carapace (bokote) of tortoise. This is used as a plate and the bone of Nile perch (iji) used as spoon; Source: Author, 2023

The upper carapace of the turtle is used as a plate/food bowl and the leathery under plate is used as sandals or other small leather artefacts. Turtle eggs are consumed too. According to one of the respondents, a grandmother aged 75 years:

> *Turtle is an important animal because it provides for us more than just food. If you compare today's utensils and what we used in the past, ours was the best. We still have our traditional utensils which we have kept them as a tourist attraction to the visitors who visit us. Women were so strong in the past*

because they consumed turtle eggs which were very nutritious strengthening immunity. [Female, 75 years, Komote, KII]

This perspective was also corroborated by another participant thus:

Turtle eggs were consumed by women and children. Men only started consuming these eggs recently. Men felt this was an inferior food to them. The eggs were nutritious especially feeding them to young children to boost their immunity. [Female, 63 years, Layeni, KII]

Thus, the study findings indicate that the three animals namely hippos, crocodiles and turtles are delicacies among the El Molo. The processes involved from acquisition to consumption of these three animals perpetuated cultural and group identity among the El Molo.

4.3.3 Various fish species consumed by the El Molo

Fish is another important source of food for the El Molo community. The study results show that in El Molo community fish is classified according to various criteria in their traditional knowledge. For instance, the classification determines fish preparation and consumption amongst the clan members. Also, cooking method determined fish preparation. The two methods used for cooking is by either boiling or roasting. The respondents from women focus group discussions in both villages noted that they later learned how to smoke fish from interactions with other communities.

The study findings indicate that the common fish consumed in this community are; Nile perch, the El Molo differentiate Nile perch by sizes. The biggest Nile perch is called *iji*, middle sized is *jinte* and the smallest one is called *ekertete*. There is also *enyilate* that is grouped together with Nile perch family. This fish is described as a fish that is gold in colour and is rare to find. Then there is tilapia. The respondents named three tilapia species which are; Turkana tilapia-*Oreochromis niloticus vulcani* (*singiririok*). The male Turkana tilapia is called *geer* whereas the female is called *kora*. Then there is Redbelly tilapia- *tilapia zillii* (*kido*) and Galilea tilapia- *Sarotherodon galilaleus galilaleus* (*yergu*). Today, the respondents noted that they prefer to sell this type of fish species because of its attractive market price as it is a delicacy for most fish eaters.

According to the El Molo, mudfish and catfish are related because their skin is slippery smooth. The different types of mudfish consumed are; *nukate*, described as a fish that is black in colour. There is *muntar* with a head that is bigger than *nukate* and lastly there is *liss* that is white-yellowish in colour. For the catfish, there is *tar* described as a fish with horns and electronic sparks when touched. Then there is *pua* which also has electronic sparks; *tikir* described as fish with three horns and lastly there is *sila*. Fish belonging to tiger fish (*koris*) species classification include; *yoot* described as fish that is white in colour with a horn at the back and *nyeele*. *Nyeele* has small head according to the respondent's descriptions.

In the case of salmon family, the following fish species were documented; *kara*, *karno*-differentiated from the rest because of its big mouth compared to *arte* and *kunyakate*-described as fish with horns where the body colour and its scales are almost similar. *Arte* is distinguished because of its small mouth and finally *sursur* where the respondents noted that this fish species has disappeared from the lake. Another fish that is commonly consumed by the El Molo is Nile distichodus- *Distichodus niloticus* (*gala*). Moreover, the study findings also found that the same name of the fish (*iji*) is still used for different types of fish species or the name is used to refer to knowledge in regards to expertise in fishing. Also, at various stages of growth and development, the community uses a particular name where the name changes once the fish reaches maturity age.

The study findings indicate that in the past, the El Molo used baited hooks, spears, and fishing nets which were made from doum palm fronds. The use of basket trap was adopted from the Turkana. Baskets are used in muddy reedy areas to catch bottom fish in the presence of light like moonlight. Below is a description of the fish species in relation to how they were acquired, preserved, prepared, cooked, and eaten as narrated by respondents from the in-depth interviews.

According to respondents fishing is done either along the shores of the lake or in the deep waters. In the case of deep waters, netting is carried out in the afternoon and is left overnight. Before dawn of the following morning, the El Molo men/women net out their overnight catch and bring it to the off shores where community members wait for them to help in fish preparation. The activities start first by removing fish from the net and then fish with scales are scratched a process known as *mbala*, gills are removed (*chubwan*) also internal organs are removed. This whole process is referred to as *keirungusi*. Fish prepared for boiling is prepared in the following manner.

In preparation of tilapia (*singiririok*, *yergu*, and *kido*) close to the head, there is a fin; the fin is pressed to make a hole after which internal organs of the fish are removed through that hole. It is left at that, but when ready for cooking, tilapia is cut along the lateral line with the head intact. After the cut, there are two parts referred to as *par* and *ikana*. Lastly, the head is cut and then all these parts are put in a cooking pot ready to cook. *Yergu* is prepared like the tilapia if it is big; but, if it is small it is cooked whole. For the salmon fish (*kara*) (*karno*, *kunyakate*, *arte* and *sursur*) preparation, a cut is made through the stomach then, hand is inserted inside the stomach to remove the internal organs of the fish. When ready for cooking, the head is broken and left hanging and then the fish is cut across into two. After cutting, the head is separated from the *kach*. The tail part is referred to as *ginnet*.

Below is a song the is sung in praise of salmon fish (*arte*);

Arte, chololo
Purre, chololo

The El Molo imitate the jumping and diving of fish into water. The way the fish spreads itself while jumping is what is referred to as *chololo* while diving inside water is referred to as *purre*. The vignette continued in the following manner:

> *While preparing mud fish in this case muntar the stomach is cut and the ribs are removed. The meat part of the ribs is called apap. Then the upper part is cut from the tail which is called jire then the head is cut and separated from jire. The jire part is given to the sisters (either to the wife or the husband) whereas the head is given to the uncle (Au) from the mother's side. Apap and the tail is left for the owner to cook. In preparing liss, the head is cut then the internal organs are removed, for cooking purposes, liss is cut into three parts whether big or small; the head, middle part (kach) and tail (yergote).*

Preparation of *nukate* for cooking, the head is cut first then the rest of the part is cut into pieces; its preparation also depends on clans and their taboos. Among the *Orgargite* clan members, men do not eat the gills, private parts and the end of the tail and *Lmarle* clan do not eat the head of the fish. On the other hand, women are allowed to eat the whole fish. *Deehesh* is prepared like *nukate*. On catfish family, (*tar*, *pua*, *tikir* and *sila*) they are left to be cooked whole but it also depended on clans.

The process of preparing Nile perch (*iji,ekrtete*, *jinte*) is very elaborate and is followed in all clans because food is shared communally and a person belonging to *Lmarle* clan who do not consume some parts might be present during meal time. Preparation of *iji* begins at removing *luk* - a fin that is closer to anal fin, then remove the end part of *lalapate*- the whole dorsal fin, then tail *(yergote)* and finally the *guff*- stomach part (the end part of anal- *tup* is cut; *tup* and *luk* are said to be attached together. The throat (*igos*) the place that holds gills, lips of the mouth (*omolini*), the tongue (*gos*) and the cheeks are cut and removed. Also, if the dorsal fin has no 'needles' known as *iji-okordo*, then *Lmarle* clan do not eat the whole Nile perch. They only eat a Nile perch that has a flat dorsal fin.

For a big *iji*, the flesh *(sere)* is cut and removed from both sides of the ribs only the bones remain. The head is separated from the backbone. The backbone is cut into small pieces then it is ready for cooking. In the case of its head, gills are removed then *gos, laka* and *iba* are all cut and removed. What remains is the skull of the head which is flat and then the head is broken into two. The eye part is called *soono* and the back part is called *gin*. After which all the remaining parts are gathered ready to be cooked. Big *iji* is eaten by elders especially the fat ones. Its fat is called *gero* which is cooked like *tira*. Sometimes men prefer eating *gero* while fresh. They mix *gero* with s*ere* and consume the mixture as a whole meal. *Sere* is also dried and preserved for future use. *Enyilate* is prepared the same way as Nile perch.

The Tiger fish (*koris*) is a very revered fish among the El Molo. During preparation, a cut similar to tilapia is made but, in this case internal organs are checked first to see whether they have fats before removing them completely. If the internal organs do not have fats, they are pushed inside the stomach and the fish is not consumed. Along the shores of the lake, when people are removing fish from the

net and the fisherman or any other person in particular notices that a thin *koris* has been caught, immediately, the man or the woman picks the fish and begin by preparing it. When preparing the tiger fish, gills are removed first then internal organs which are cooked as *tira.*

In times of cooking, the bone connecting to the head is broken like *kara* and then it is left hanging without totally separating the parts. It is said that while cooking the parts separated themselves; the *kach* and the *ginnet.* If thin *koris* is caught, preparations are done the same way as the fat *koris* but in this case, the thin *koris* is left to burn in the fire. The fish burns until the fire ceases on its own. Lighting of fire and burning of the thin *koris* happens outside *miin*. Nobody is allowed to touch the place where the thin *koris* is burning. This fish is prepared with immediate effect to wade off the curse that it carries. In El Molo culture, from the focus group discussions among the males, if a thin *koris* is caught and you return it to the lake; it is believed that you can go wherever you wish but, finally you will come back and die at the same spot where you threw thin *koris* inside the water. If you happened to spear it, then you will die by spear. Below is a song sung by the El Molo while fishing in praise of *koris*;

Siila (stomach fat), intaayainteiye (Praising the parts of the fish)
Kulamako, (body of koris), intaayainteiye
Kootiye, (fats in the backbone), intaayainteiye
Kadeiya (the three horns), intaayainteiye
Siriwaya, (fat on the sides of the stomach), intaayainteiye
Pulapula (sound that it produces once caught), intaayainteiye

When this song is sung to the *koris*, the belief is that even if the fisher is stung by the fish, its bones will disentangle themselves from the fisher's flesh. Below is a continuation of the vignette.

If there is an impending danger like an attack from neighbouring communities or wild animals, the El Molo men embark on fishing specifically hoping to catch large number of koris. After fishing, all koris are placed strategically in specific places especially at the community's entrance to the village. The fish is also placed along the boundaries demarcating the community surrounding area. When the attackers come, they are stung by the bones of the fish which are said to be poisonous. The El Molo narrated that once stung by these bones, it is impossible to remove the bones on your own. The bones are described as looking like a see-saw. The more a person is stung by them and tries to remove the bones on their own the more the bones cut through the persons flesh.

The respondents narrated that the enemies are found early in the morning in the same place that they first got stung, sitting still in the same position and writhing in pain. *Koris* as a weapon tool is used for protection method for both humans and animals. Conversely one of the respondents aged 62 years affirmed:

We as El Molo people have our very own weapon given to us by Waaq to protect ourselves from our enemies. We don't need sophisticated weapons; koris is enough for us. [Male, 62 yrs, Komote, IDI].

The study findings reveal that for the El Molo, *koris* is a source of food as well as a weapon serving more than one purpose. Below is the continuation of the vignette:

> *Gala is prepared by cutting the head close to the fin, then the head is broken (the head is left hanging) internal organs are removed and the gills are not removed. On the other hand, while preparing for cooking, gala's head is cut first, then a cut is made along the lateral lines to divide it in to two parts; the par part is cut into three pieces. Yoot preparation is the same as gala but there is a difference in the way par is divided; it is cut into two. In the case of roasting, tilapia is roasted whole. While eating then, the head is separated from the rest of the body. For the following fish, this is the mode of preparation before roasting; kara, arte, karno, yoot, kunyakate, and nukate their heads are broken. It is said these type of fish is caught on the northern part of the lake while the ones caught on the southern side of the lake; koris, iji (small ones), and karno are roasted as whole but, before they are fully roasted, their heads are broken. Liss and Muntar which are also caught on the southern side are cut into pieces the same way as for boiling before roasting.*

The study findings reveal that the various fish species are not just food; they are also embedded in El Molo way of life. From the findings, Nile puffer- *Tetraodon lineatus* (*tuwaate*) is said to be poisonous hence not consumed by the El Molo.

i) Consumption of indigenous foods among the El Molo

When it came to food consumption, the study findings reveal that in the past, the El Molo consumed two meals in a day which were lunch and dinner. Although meals were communally shared in the past, sometimes there was no catch and some families slept hungry. In such scenario where a family had slept hungry then, in the morning when the fishermen came from fishing and preparation was taking place, all fish intestines (*tira*) were put together, cleansed, pancreas was removed and then they were put on fire to cook. Fish intestines are said to contain lots of fat. Once the meal was ready, the pot was put aside to cool down. Fish oil which was the top layer was scooped and poured in another *nkunate* then, *tira* was served. Tortoise shell (*bokote*) was used as plates while fish bone (the jaw of *iji*) was used as spoon.

The respondents continued to give detailed account of the proceedings of serving food in the following manner:

> *In order of serving, young children were served first then, the father followed then the young men, the girls and finally the mother. The husband was served the best part of the fish because he was the man of the house. If there were leftovers, the food was set aside for anyone who needed more food. The father and the son sat on the right side of the house while eating, on the other hand, the mother and the girls sat on the left side of the house close the fire. Because the main method of cooking was boiling, fish was served with soup. In most cases, tira was eaten by anyone who was hungry. Some people are said to not having a liking of eating tira. Also, if a family had stayed for long without eating a meal and that at the dawn of the morning they had netted then the family would prepare, cook and eat their meal (whole fish, broth and fat).*

The study findings indicate that for the El Molo, lunch time meals are consumed inside the house. It is a taboo to eat outside the house a practice that is still observed in the villages. During dinner time, it is a taboo to eat food in the house. Food is consumed outside the house where moon and stars provided

natural light. Discussions with many elderly women participants were streaked with beautiful memories of their past. One female key informant in Layeni village aged 78 years recalled vividly how she used to tell if food was ready with a beautiful wide smile that exposed her brown teeth. She had this to say:

> *We would tell if our food was ready for consumption because its aroma wafted through the air leaving other family members salivating. A well-cooked fish meat is soft, while boiling if it is poked and it is hard then the fish is not yet well cooked. If the cooking stick/spoon penetrates the boiling meat easily then it is well cooked. In roasting case, if the skin is hard, then it is not well cooked but if the skin becomes soft then the meat is well cooked and is considered ready for consumption.*

ii) Making of cooking pot

The study findings indicate that the El Molo make their cooking pots from the mud soil of Lake Turkana. The elderly woman narrated how cooking pot (*nkunate*) are made in the following manner:

> *Around Lake Turkana, there are specific areas where the El Molo know they can dig and get mud. The mud is mixed with the sand; there is constant striking of the mud to loosen. Once the mud is loosened, the mixture is put in a tray (made of doum palm fronds) and sand is sifted from the mud. The final product is a refined mud. Water is then poured in the mud in small quantities to knead the mud. Kneading is done to achieve a smooth texture required for making a pot. After this, the mud is cut in sizes and ribbons are made out of this; these ribbons are rolled in a circular manner. The equipment used to roll the mud and make it smooth is known as parakite (a piece of a broken calabash). This equipment shapes and forms nkunate to different sizes according to the potters liking. The final product is placed under masai, then put under a shed to dry which takes up to four days to dry. When dry, the El Molo search for cow dung (which acts as firewood) and light fire. Cow dung coals are scooped and inserted inside the pot while at the same time exposing the outside part to the heat. The pot is considered ready when its color changes to almost red then; the pot is left to cool down. This pot is tested before it is considered fit to be used. Small amount of food is cooked using this pot to test if there is any leakage. This food is only eaten by women. After the testing, the pot is then used for daily cooking.*

iii) My own observations and experiences

I also participated in helping with cooking. She had an experience preparing dinner for the family that had hosted her in Komote village. My experience is captured in the vignette below:

> *One day, I finished my interviews early and I decided to prepare the dinner for my host family. The lady of the house was not around as she had gone to help in distribution of food which was taking place at El Molo dispensary on the mainland. She had prepared chapatis (flat bread) in the morning and had left beans boiling in low heat in the kitchen. The kitchen is a small doum palm thatched hut. Inside the kitchen, there is the fire place with three stones on one end where cooking takes place, a few jerry cans of water and firewood on the other end. The cooking pot is the modern pot- sufuria is made of aluminium. My host house is adjacent to his mom's house. The man of the house called his sister (a teenage girl- Maureen) to come and help me with cooking. I was determined to prepare a meal for the family so I asked Maureen to bring me onions, tomatoes, another sufuria, oil, salt and a stirring spoon. I had seen that the lady of the house fried her food with onions she would later add tomatoes to add flavour. Maureen told me she would fry the beans as I help in washing lunchtime dishes. She told me they neither had tomatoes nor onions. Maureen explained to me that they sometimes lack these items. I watched her prepare the beans. First, she took the cooked beans from fire, she then separated aquafaba from the beans and then she took a big wooden spoon and mashed the beans to make a thick sticky substance. She then asked me to take a clean sufuria and put it on fire to heat, oil was added to the heating sufuria; then, the oil was left for few minutes to heat and then the mashed beans were added to the hot oil. From here, there was continuous stirring while adding aquafaba or in the absence of this small amount of water is added to loosen the mashed beans and make a thick substance then, salt was*

added to taste. The thick substance was left to cook for few minutes in medium heat. The end result was something like a thick soup that was served and eaten with chapati. Had I prepared the meal, I would not have mashed the beans; as it is common from where I come from to fry beans as whole cooked grain. Modern plates and spoons were used in serving food. The plate's ranged from melanin, plastics, and glass and metal plates. The children were served first then, the visitor, then the rest of the family members. In both villages people eat together as a family. Also, it is common for other family members to join others while eating. So, the girl told me they always make extra food for any other person that might be present during mealtime.

I can also recount my experiences in Layeni village. In Layeni village, my host lived close to the lake. Just like one hundred (100) metres from the lake. During my stay, in the evenings when night whistled away with a promise of filling our stomach, I would join my host family members and together we would sit on a mat outside my hosts' house. A big mat was spread on the ground for sitting purposes. Women and young children sat on the mat whereas men sat on plastic chairs or wooden (similar to Turkana chairs) telling each other stories. Teenage girls were tasked with cooking, serving and cleaning the dishes. Men and women contributed in telling each other stories that varied from one subject topic to another.

It is common for them to either sip some tea or chew *miraa*-khat during this time. In this village, there is a certain kind of calm, especially at night lying on a mat gazing at the full moon and the stars. The wind would roar and my mind would roam together with the wind. The air kissed my lips the new comer in the village leaving its taste with me. Just close to the lake there is a small tree, and adjacent to the tree I would spread myself on the mat my face facing the sky smiling at the moon and the stars and they in return continued shinning bright appreciating my smile. At the back of the tree there were always young adult males who sat on wooden bench fishing with their baited hooks. I would lie there soaking in the beauty of every moment.

A moment in a life time where everything seemed to fall in place and you see what matters most is family. Customarily, I would lie there and a feeling of a strong sense of belonging would engulf me as if I was one of them not a visitor as they considered me. The children were fed early either from lunchtime leftovers or some food that was prepared for them. Food would be served and everyone would be in harmony with their plate. The lake on the other hand, seemed to tell its own tales of how it has been there for thousands of years, and it looked like the nature argued with itself in a civilized manner telling each other of who was greater than the other. People ate their meals quietly, for me eating with the family felt sacred as it brought a sense of belonging and love. After eating I would look above once more for the moon and the stars and in return the light from above would shine brightly as if saying "I am because we are".

For the El Molo living in Loiyangalani town, food is served and eaten either inside the house or outside the house. The researcher's host family did not follow the traditional patterns of meal consumption. All family members from these three locations commune together during meals and stories are shared as people consumed their food. From the research findings, the El Molo are a community that treasures their culture and this is propagated through sharing of food as narrated by the researcher from her observed experiences. Profound knowledge from food acquisition to preparation is a case in point. One of the respondents had this to say:

Our knowledge of food preparation was passed to us by our grandparents. We do things as they did. The only disadvantage is that some of these foods are no longer consumed so I have no idea on how to prepare them. [Female, 35 years, Komote, FGD]

Plate 21: Elmolo man removes fish from the net using *moono.* This is carried around the neck by the fishermen; Source: Ismael, 2022

Plate 22: An Elmolo boy carries his tilapia and Nile Perch catches,; Source: Ismael, 2022

Plate 23: Elmolo children in Laveni village paly with Turkana basket traps. These are used in muddy reed areas to catch bottom fish; Source: Ismael, 2022

Plate 24: Elmolo man show off the results fishing skills by use of spear; Source: Ismael, 2022

iv) Symbolic meanings of fish in El Molo rites of passage

The study findings reveal that all El Molo ceremonies in the past were done via the medium of fish. According to women focus group discussions, before a child is born the expectant mother and her family prepares for the following; dried fish bone of *iji* (Nile perch) and *kara* to make soup *(eer)* for the mother which is consumed after the delivery of the baby. There is *pirr*- a sleeping mat for the baby made from doum palm leaves, *kirit*- a piece of fish net which forms part of the baby's bed, *masai*- algae plant (water reed) that grows in Lake Turkana, this is also part of the baby's bed, *torte*- ostrich feathers used in wiping and cut umbilical cord that remains with the baby after delivery, *sagaram/lmantusa*- seeds from acacia tree is boiled then left to cool down and later the liquid is sieved to achieve the desired result. Then, there is *nkunate* (pot) used in storing the *sagaram* fluid, *kalate* a kind of spoon from fish bones used in feeding the baby and *yeere* a knife used for cutting the umbilical cord during delivery.

Once a child is born, a string made from hide (sheep/goat skin) is tied to the child's waist to symbolize that the child is alive. The child is made to wear a round shaped metal ornament on its right hand and a necklace made from ostrich egg shells *(kukuti)* is tied along the child's neck. All these items are a symbolism of welcoming the child as well as celebrating a new life that is added to the community. These items are round in shape (in a circle manner) to symbolize eternity. The baby's bed is laid in a specific manner where *masai* is at the bottom, followed by *kirit*, then *piir* and lastly skin is placed at

the top. All these items are symbolic because the baby is expected to be a skilful hunter/ fisherman. With respect to the birth of the child, several initiation ceremonies are conducted in a meticulous manner for the child to be fully integrated in the society. One female key informant in Layeni village aged 68 years old gave accounts of what precedes once the baby is born in the following manner;

> *The infant is named after the umbilical cord falls off. On this particular day at night the maternal uncle and the father go fishing to provide food for naming ceremony. The following morning, women in the village gather and prepare the fish that was caught the previous night. After preparing the fish, the fish is cooked by boiling. The fish is only meant to be consumed by the women present. This is a ceremony for all women especially the elderly women who then assume the role of teaching the new mother on how to raise a child according to El Molo culture. The mother especially if she is a new mom is taught what to eat and not to eat. The new mother is supposed to consume the soft parts of the fish which is the meat along the ribs of the fish. The mother is to refrain from eating meat from the back of the fish and she is required to drink soup (eer) in plenty. In preparation of eer, fish is boiled, and then it is left to cool down, while cooling down the soup sieved itself. The mother drinks the top layered soup leaving the bottom layer. This top layer is considered healthy and is good for breast milk. Specific fish species that are not to be consumed during this period are; tikir, nukate and mutar- fish with no scales. It is believed that the skin of the fish is not healthy for the new mother because it causes constipation.*

According to the respondents, the new mother is only allowed to consume fresh fish. It is the duty of the helper to prepare and cook meals for the mother. The helper is a family member preferably the first wife of the eldest brother or the maternal mother. If the new born is a girl, this continues for a period of three months; but if it is a boy, then it lasts for four months. It is believed that these months signifies the blood that is shed during child birth. Also, it is believed that the growth rate of girls is faster than the boys the reason the months differed. The fresh fish consumed by the mother during this period is caught during the day not during the night.

This is because the belief is that the fresh fish is said to give the woman strength. If she eats fish that is considered not fresh, it is believed that the mother would suffer from stomach problems. After the given period, the mother returned to her normalcy of consuming meals like everyone else. Although the mother is not allowed to eat these fish species (*tikir*, *muntar*, and *nukate*) if there is no fish caught, she is allowed to only eat the soft part of the meat but not the skin. On this same day of celebration, the baby is bathed for the first time since birth. It is also the day the mom consumes heavy food since the day she delivered. Consumption of fish for the mother during this period depends on clans. Each clan has its own taboos on consumption of fish during this period.

The study findings reveal that after the naming ceremony, there are other major ceremonies conducted namely, celebration for the completion of the four months for the boy and three months for the girl, transition to teenage hood and circumcision ceremony which is conducted when El Molo boys reached the maturity age of 15 years called *laji*. This is marked as a rite of passage into adulthood. Celebration of the completed months involved dressing the infant with *aliano*, *malinthe* and *gasar*. *Aliano* is made by the mother while *malinthe* and *gasar* is made by the father. *Aliano* is made from doum palm fronds.

Wet doum palm fronds are weaved together by spiralling two fronds together. The weaving is made to make a small string which is joined with two-half beaded strings to make a necklace. While wearing the necklace, the beads are supposed to face the front. *Malinthe* is a beaded string that is worn by the child on the waist. *Gasar* is worn on the neck. The narration continued from the key informant of the activities that preceded this celebration as captured in the vignette:

> *The day aliano, malinthe and gasar are made; the father and maternal uncle go fishing at night and the following morning, at the dawn of the day, women clean, prepare and cook the meal by boiling. This meal is consumed by women only and only the maternal uncle has a share in this meal. The maternal uncle does not consume this meal until the women are done eating. Once the women are done eating, the mother collects all bones and heads to the lake and throws the bones in the lake. She then returns from the lake and calls the brother to come and eat his meal. The brother comes accompanied by other brothers or other men. The maternal uncle is not allowed to eat this meal alone. After they are done eating, the mother again collects all the bones and again head to the lake and throws the bones in the lake. If the child died during delivery, the mother is shaved after three days. The father goes fishing on the third day; the day of shaving of the mothers' head. Women clean, prepare, cook and eat this meal. The mothers head is shaved but patches of hair are left on the head to indicate what has happened is not good. After eating, the mother goes and disposes her hair and the bones to the lake.*

The study findings indicate that fish consumption for the child depended on clans. Normally, the child starts eating fish after rituals takes places in accordance to the baby's clan. For the *Orikara* clan, anything pertaining to fish is not supposed to be in contact with the new born. If the baby starts crying and there is nobody else to pick the baby, and in this case the mother is still eating then, the baby cries until the mother finishes eating her food. She then washes her hands and any other parts of her body that might have been in contact with anything pertaining to fish thoroughly before picking the baby. Once the child starts to crawl, the father and the maternal uncle goes fishing at night.

The following morning, one fish is tied to a doum palm frond and put in a close proximity to the child. The baby is supposed to crawl towards the fish or pull the fish using the frond and play with the fish. The baby plays with the fish for a while then the fish is taken away from the baby. If the baby is a girl, then the mother roasts the fish and eats it but if the baby is a boy then the father roasts and consumes the fish. If there are leftovers, they are thrown into the lake. After this ordeal, the child is allowed to consume fish. In this clan, consumption of *koris* varies. If *koris* is cooked in another home, the fire used in cooking cannot be used by the new mother to light her own fire. If it happened that she used the fire mistakenly, it is believed that the fire affects the entire males in that household resulting in their deaths.

If the new mother cooks *koris*, then it is cooked from outside, once cooking is done, she cleans the entire cooking place but the stones used for supporting the pot are left there. If male children in that household wants to cook their meals; they can use the same stones only that these stones are carried to a different place where cooking takes place. Only the mother and the girls are allowed to eat *koris*. Also, it is only the first-born sons who are not allowed to eat *koris*, the rest of the male children can eat

koris but they eat until their mother delivers another male child then they cease to eat *koris*. The last born of the male child is allowed to eat *koris* from birth.

For the *Lmarle*, (*Urialpula*) clan, when a child is born, the child is held in the arms until morning. It is a taboo to place the child on the bed or anywhere else. Women take turns babysitting the child until morning. The mother is left to sleep until morning. From the acacia tree (*arkapite*/*ltepes)*; *deer (*the bark of the roots of acacia tree) which had been previously removed is tied to the mothers and the child's neck then, the child is allowed to suckle. The mother is not allowed to come into contact with *iji* or *tikir* or any other person is not allowed to touch the baby if they had touched these two types of fish. This rule is observed until the baby starts crawling. When the child starts to crawl; *iji* is caught and a small piece of meat is cut and the father spits on the small piece of meat then the baby is given the meat to play with it. The same applied to *tikir*.

At the same time, when the time comes for the child to start eating solid food, the father fetches a fillet of a sun dried *iji* and spits on it and in return gives it to the child to eat it (although the child does not necessarily eat it, the aim is the fillet to reach the mouth). From here the child is allowed to eat fish. A girl child is allowed to eat the whole *iji* while a male child is not allowed to eat *larka*, *lalapate* and *guff*. Among the *Orisiayo* clan, women are allowed to touch the baby while eating fish the only restriction they have is that their men are not allowed to eat the eyes part of any fish.

On the same note, one female aged 72 years old observed;

> *For the Origaya clan, when a child is born, the child is not allowed to come into contact with kara until the child starts crawling. When the child starts to crawl, the father and the maternal uncle goes fishing and from their harvest they picked kara. The father then spits on kara and gives the child kara to touch it; henceforth the child starts to consume fish. The Orgargite clan, once a child is born, they are not supposed to come into contact with anything concerning nukate until they started crawling. When the child starts crawling, then the father and the uncle goes fishing and from their harvest the father picks nukate. The father then spits on the hands of the child and again spits on the fish and hand it over to the child to play with it after which the child is allowed to consume fish. This is the same as Orikara clan where the fish is roasted and eaten by the relevant parties. Boys in this clan do not eat gir, enge, and nyarda part of the fish. For the Orgargito clan, the child eats all fish but the father has to spit on the child for them child to eat crocodile meat. And lastly for the Orisole, once a child is born, for the male children; they do not eat koris and kone fish until they die. The girl child can eat koris. Also, the boys in this clan are prohibited to eat fruits of doum palm tree but for the girl child, she can only eat this fruit during the day.*

Following the order of the ceremonies, the study reveals that rite to adulthood situated itself within a larger system of rites. For the El Molo, between the ages of 7-8 years a ceremony is conducted where two of the child's lower teeth are removed. The ceremony conducted is similar to the ones illustrated above from key informants' account of events. The study reveals that the night before the ceremony, the father and the maternal uncle goes fishing then, the following morning women clean prepare and cook this meal. The meal is only to be consumed by women but maternal uncle has a share in this meal.

The process of eating this meal is similar to the one illustrated above for the *aliano*. For the *Origaya* clan, they just removed the teeth while other clans light fire before they proceed to fishing.

In circumcision ceremonies, the study reveals that on the day of the ceremony, the young men who qualify for *laji* go fishing. On this particular day, nobody claims the ownership of the fish. When the young men return with their catch, at the offshore of the lake, women are given their share and the rest of the catch is taken to *siip*- a place that is a bit far away from their *miin* (around 200 metres from their *miin*). The elders are expected to be already at the *siip* waiting for the young men. The fish caught is cleaned, prepared and then roasted by the young men. While the food is cooking, these young men return each to their mother's home to be shaved. When food is ready, one of the elders divides the food into two; *Korchir* and *Marsara* moieties. It is a communal eating which is followed by prayers and advices from some selected elders. Women are not allowed to attend *laji* or come closer to the *siip* place but a man can take food from *siip* to his own *miin*. On the other hand, the rite to marriage involved first booking of the girl and it mostly happened right after *laji* but in some cases, a girl is booked even few days after she is born.

In the case of booking after *laji*, the study findings reveal that if both parents agreed on the booking, from that day the girl is expected to wear a necklace to indicate that she is already taken. This is followed by vetting of the suitor by the bride-to-be kinsmen for approval. The suitor has also to show his prowess in fishing and hunting. The groom-to-be goes for fishing and to provide for his in-laws. The fish caught is prepared and cooked by women whereas the elders eat this food and bless the booking. The study findings also reveal that in the past, bride wealth was four logs (doum palm trees/logs) which was considered enough to make a raft which was essential for fishing also, a means of transport. The boy was required to search for the best logs far away from home. One of the qualifications of the logs was that it had to be the best one and a very strong log.

And lastly, when it came to death of an El Molo, the study findings reveal that the El Molo pour fish fat/oil, tobacco and water inside the cave. These items are poured in the cave before placing the body so that the dead can continue enjoying the delicacies even after death. From time to time relatives of the deceased feed the deceased by placing fish at the entrance of the cave or in today's world on their grave. This practice is still observed up to today.

4.4.4 Symbolic meanings of plant based and wild birds as indigenous El Molo food systems

The study findings indicate that fruits from doum palm tree (Hypahene *coriacea- kadish*), toothbrush tree (*Salvadora persica- esokon* [Turkana word]) and acacia tree (*Acacia tortilis- arkapite*) are also consumed as indigenous foods. Fruits from doum palm trees are used as medicine where they treat stomach aches. The hard nut of the fruit is used as firewood. The El Molo narrated that these fruits are

packed with high energy and up to date they are still used as a source of food during times of prolonged drought where there is food shortage. Toothbrush tree not only produced fruits but also the small branches are used as tooth brush. The fruits are mostly consumed by children and young adults of both genders.

Additionally, the study findings reveal that seeds (*sagaram/lmantusa*) from acacia tree are used as medicine for an infant baby. Once a baby is born, in the first few days, *sagaram/lmantusa* is boiled and left to cool down. The top water separates itself from the bottom water. The top water is fetched and stored in a pot *(nkunate).* This fluid is given to the newly born baby for a couple of days to cleanse the baby's alimentary canal.

Similarly, some of the wild birds consumed by some of the El Molo clans are; *waale, taato*-duck, *ilaila, sirante*-flamingo and *arle*. The *Lmarle* clan does not eat any of these birds. The findings indicate that *kutiyame* (white herons-egrets) and *geer* (Kingfisher) are considered as a bad omen in this community. *Kutiyame* is not allowed to fly close to the house and if seen the bird is chased away before it gets close to the house. In the case of *geer*, if it happens to fly over the house, boys from *Lmarle* clan takes *masai*, light it with fire and throws this *masai* on the rooftop to symbolize that the bird will fly away with the curse associated with it.

4.4 Impact of socio-ecological changes on El Molos' perceptions of their indigenous food systems and symbolic meanings

i) El Molo ecological knowledge

The study findings attest that among the El Molo, Lake Turkana is the mother earth that provides food, recreation activities, means of transport, weather forecast, security from hostile neighbouring communities and spirituality. In other words, Lake Turkana is entwined in every way of El Molo life because it has cultural and spiritual connections among the members of this community. Lake Turkana is considered as the best gift given to them by god (*Waaq*). The respondents noted that people are discouraged from taking more from the lake. At all cost, everyone should be in harmony with the lake because it is their only mother earth that sustains them. Indigenous El Molo ecological knowledge is understood by observing wind patterns, appearance of specific stars during different times of the season, observing movement of the lake birds and season when they laid eggs also through appearance of full moon.

El Molo utilize this indigenous knowledge and know when to go fishing, hunt hippos, crocodiles and turtles, when to collect crocodile and turtle eggs and when to avoid fishing or sailing. From the

narration of the respondents from in-depth interviews there are different types of winds according to their ecological knowledge. Every specific wind carried its own distinct message which is important for the survival of this community. The winds also communicate availability or unavailability of fish and appearance of rainy seasons. These types of wind are illustrated in the excerpt below:

> *Kayeuru/Kaiyewuru. The wind blows from west to east. When this type of wind blows it is a sign of beginning of rainy seasons; kaiyewuru brings fish and hippos along the shores of the lake. This is the best time to fish especially harpooning. This wind makes sailing difficult. In the case of Parkan, this type of wind blows from north to south causing dust storms. During this period, it is difficult to sail. Parkan is described as a destructive wind which results in hunger as the El Molo cannot fish therefore, the El Molo cook their preserved food to sustain themselves during this period. For Karrit wind, the wind blows from southeast to northeast. There is plenty of food during this period since the lake is calm enhancing sailing. Yeen blows from southeast to northwest. Yeen is extremely windy where there are no clouds, causes wind erosion uprooting trees. This type of wind is described as destructive as it causes a lot of accidents around the lake for the fishermen fishing. Temperatures are high during this time also; it is the time for the crocodiles to hatch eggs. Goreerro/Jukan blows from northwest to northeast. This type of wind drives fish way to the deeper parts of the lake but people can fish Nile perch by use of hooks as it pushes this type of fish close to the shores of the lake. During this period, fishing and sailing is difficult. And finally, Jiike blows from south to southeast a calm wind where fishing and sailing is good. This type of wind is said to bring rains. There is a plenty of good catch providing enough food. Jiike and Karit winds are known to bring good tidings with them as both winds provide good catch.*

The study results also demonstrated knowledge of different aspects of the sky. The El Molo possess an enormous amount of knowledge and wisdom about stars. They have a unique relationship with the sky which provides information on their ecology through the appearance of different stars throughout different seasons. El Molo unique relationship with their ecology enables them to interpret different types of information re-laid to them through the stars. They observe the motion and positions of stars to forecast weather. These stars are given names such that when seen, by the mention of the name a person automatically decodes the message the star represents. These stars are described in the excerpt below;

> *Koi a midnight star that appears from the south in the month of April and marks a season of heavy-long rains and the breeding of water birds (pina), fish and hippo; hippos give birth and crocodiles hatch eggs during this period when koi is seen. During this period, there is a good catch especially Labeohorie and Nile perch feed along the shores of the lake therefore, there is fished in plenty. Due to abundance of fish the community preserve some of their catch and store them for future consumption especially during turbulent times when there is no fish or during stormy winds. Sere or dried Nile perch fillet and fish oils are produced and preserved in plenty for future consumption. There is also Talmaneni an early dawn star that appears from the south to east during the month of August and mark the seasons of heavy rains. Nothing breeds during this time especially the animals consumed by the El Molo. Thin Labeohorie (kara) is found during this season, they are said to be thin and tasteless. The only fish found in plenty during this season is mudfish (nukate). This is a season described as there is an outbreak of various sicknesses such as chest problems and pneumonia. Sirante birds migrate during this season and returns only when water starts to recede. Tian star appears from the east in February and marks the seasons of strong winds. It is a time marked with recurrent lake accidents, fishing becomes very difficult and it is a time described as people become very dehydrated. Sirinyeny is an evening star that appears from east in June and marks the end of laying eggs for the turtles. This time also, the lake stops from high tide to low tide. Ngakwa is an early morning star that appears from the north to the north east in the month of April marking the beginning of rainy seasons. Weather is cold during this time a breeding*

time for hippos and crows. When Chade is seen, it is a birthing season for the crocodiles. Finally, Talmaneni le guraalia this star is also called star of Dassanech. It appears from northwest during the month of December. During this time there are high tides, fish catch is low and the large plover bird (rigo) hatch eggs.

The study findings highlight that indigenous ecological knowledge celebrates many ways in which El Molo have accumulated traditional wisdom which is transferred generationally. This knowledge presents intellectual complexity which largely has gone unexplored and unrecognized. This form of science is still used by older generation today to forecast weather at the same time this knowledge is diminishing since the younger generation either partially know the knowledge especially the ones who live in the villages whereas the ones who have pursued/ or pursuing higher education completely have no idea about this knowledge.

ii) Social-ecological changes witnessed and its impact

The study findings indicate that the El Molo live in a delicate ecosystem characterized by prolonged droughts, rise in temperatures and strong winds and changes in rainfall patterns that results in flooding due to the soil condition and lengthy rainy seasons. The El Molo are also prone to disease and conflict. Recently, the lake water levels started swelling in an abnormal way reclaiming land as well as displacing some El Molo who live in close proximity within the lake. The respondents narrated that unlike in the past where the lake water levels rise during specific seasons throughout the year, the year 2020 was different. The lake water swelled and the ground became too deep even to cross over to the mainland by foot.

In the month of August, when *Talmaneni* star appears, it marks the seasons of heavy rains, after this season, in the month of October and November, the villagers expect the water to start receding slowly. The researcher was there during between the month of October and November, 2020 and the respondents said that the lake continued to swell instead of its water regressing.

This change was new according to El Molo traditional calendars and brought a major confusion among El Molo elders who were accustomed to certain ways of interpreting seasons. The elders were convinced that the rise of lake water levels is a blessing to them. The rise of lake water levels is considered to be an act of God (*Waaq*) showing his marvellous power to His people. Due to rise of lake water levels, fish breeding grounds have been affected leading to migration of fish to different zones within the lake. Also the rise of lake water levels has submerged graves, which is considered a blessing as the water nourishes the ancestors. It is within the El Molo customs to feed the dead and one of the items used is water. One respondent, a 74-year-old man said:

We have no problems with the graves being submerged in water. Our ancestors are safe as their spirits roam within waters and sometimes we see them fishing or they come to us while fishing to teach us some of our forgotten traditions about fishing in the lake. We are at peace and we believe our ancestors are also at peace. Our worry is that the rise of lake water levels with the ground becoming too deep is destroying fish breeding zones.

Another respondent a 68-year-old female said:

Although the water is a blessing to us, we fear that fish species will migrate to other breeding zones that are far away from us. Currently, the type of fish we net are very small and we net in small quantities compared to what I grew up seeing. My hope is that the lake will replenish itself so that we can get more food. We receive relief food aid but that is not enough. We need our fish.

The study findings also reveal that in the past, the lake water levels declined something that was attributed to construction of Gibe III dam in Ethiopia. This also affected the fish breeding zones as well as migration of animals. The elders narrated that in the past, the lake covered both villages where they are now settled. In this era, all El Molo lived in Loiyangalani area within the vicinity of oasis. The El Molo are said to have later moved to the villages where they settled. This was corroborated by KWCS participant in the key informant interviews. According to the participant, rise and decline of lake water levels usually affect feeding habitat of the lake animals. The key informant noted;

Over the years, we have observed decline in lake water levels leading to migration of lake animals. We are now dealing with rise of lake water levels which is affecting the ecosystem of the lake. These changes are a concern for communities who depend on the lake for their subsistence livelihood. The ecological change in the lake is majorly attributed to climate change and human activities. We try as much as we can to conserve the lake's ecosystem to maintain species diversity and for future generations. Also, poachers encroach these spaces killing these animals for their personal gains. So as much the community might be allowed to kill the wild animals, they are restricted. If they community freely hunts these animals, we are going to lose the lake's biodiversity since we are likely to have rogue individuals encouraging the community members to hunt animals for financial gains. [Male, Loiyangalani 52 yrs., KII]

The older generation are convinced that the lake water eventually will reclaim its territory. On the other hand, hippos are said to have migrated to Ileret in search of food. The vegetation that was found within the El Molo village is no longer there. Although the hippos have migrated the respondents narrated that when *Lmarle* clan conduct their rituals on their shrine, it is said hippos show up to honour their sacrifices and when the ritual is over the hippo returns back to where they came from. This insinuates that with the absence of elaborate rituals conducted during a hippo hunt to indicate the sacredness of the relationship between the El Molo and Lake Turkana, the hippos will continue to move further away because there is no reciprocity. On the same note, one male 35 years observed;

Although I have never participated in hippo hunting, I have seen countless times where hippos visit us when rituals are conducted in Lorian Island. This is one of the sacred moment for us as a community. I wish as a man I could be able to hunt hippos just the way my ancestors did instead of hearing countless stories narrated to me by my parents and grandparents. All we do now is to admire the hippos when they visit us during ritual.

The study findings show that apart from ecological changes, modernization, acculturation, migration and urbanization have contributed to dietary change among the El Molo. The El Molo have adopted various aspects of pastoralists way of life especially acquiring of goats and sheep. Today, they also rear domestic birds- chickens and geese. They now substitute their indigenous foods with these acquired

animals. The study findings indicate that sheep/goat have replaced use of fish during major ceremonies. Although the El Molo keep goats and sheep they are not reared in large numbers. If a community member rears a herd, they do so far away from the village where one of the family member takes care of them.

This is a survival tactic, if large herd is seen in the villages they risk attacks from their neighbouring communities who practice animal raiding. It is important for this community to be perceived as poor so as not to attract any attention. El Molo are referred to as a peaceful community where other communities seek refuge in times of crisis. Some domains have retained use of fish like birth of a child to teenage hood. In the case of *laji*, goat/sheep is killed and eaten to mark the ceremony a learned culture from the *Asapan* (Turkana initiation ceremony).

The male respondents from focus discussion groups noted;

> *For us to replace fish with goats/sheep is a good thing unlike in the past where we were considered poor. We are now rich and we can afford to slaughter our own animals during ceremonies.*

They also have learnt from their Turkana neighbours how to store meat in *nyebur* (a calabash container) for future consumption. This practice is done by the Turkana to preserve the meat for a long period especially when faced with prolonged drought. Additionally, meat is stored in this container and eaten as delicacy from time to time. One female 70-year-old observed;

> *Our interactions with other communities have helped us so much. Because in the past we only preserved our food through drying. Now nyebur has become part of our culture. You are likely to find nyebur in most of the households you visit. We also have learned other ways of cooking our fish from visiting communities. Now I can fry fish and smoke. When I was growing up, we didn't fry our fish. But now so many things are added to the fish to add flavour. Though we still prefer our traditional way of cooking fish. In our way of cooking, we do not add salt to the fish since boiled fish has its own distinctive sweet taste. We also prepare fish oil for sale. We sell this product to tourists and locals. We have always used this product as medicine to treat various ailments. Surprisingly, other communities have learned the importance of fish oil and now we have market for our product.*

It is imperative to note that the study findings reveal that other surrounding communities are now fishing due to commercial and nutritional value of fish leading to competition and encroachment of fishing grounds. Also, foods donated by the Government of Kenya, non-governmental organizations and foods bought in the shops have replaced fish as their staple diet. Although fish is still consumed, it is not consumed as the only whole food like in the past. Today, fish is consumed accompanied by *ugali* in most cases. Similarly, fish is prepared according to the liking of the cook, either dry fry or wet fry. These different methods of cooking are learned from interactions from other people both locally and internationally who visit them and live among them. The El Molo have also travelled and learned different ways of cooking.

The government official noted;

> *I take pride of my identity as an El Molo. I grew up in the villages but I had to leave that life as a boy to pursue education. I might not really know the nitty-gritty details of my culture, but I have been on the forefront advocating for issues affecting my people. We need to revisit the KWCM act on conservation. My people should be able to enjoy their delicacies without fear. But also there is a catch how do we relax these laws at the same time keeping poachers at bay? This is a dialogue that needs to happen. When I am on leave, spent my time with my people. I am also learning about my identity as an El Molo (Male, Loiyangalani 64 yrs., KII).*

The study findings show that food symbolism in relation to fish has not changed. Though, due to prohibition of consuming certain indigenous food systems, the current generation is not in touch with the historical relationships of their indigenous foods. Without consumption of hippo, crocodile and turtle, there is a loss of traditional knowledge and wisdom. Every animal consumed preseted reciprocal relationships between the El Molo and the environment. These restrictions compromise the ability of indigenous food systems to nourish the El Molo and the El Molo in return loose morale of protecting their foods by taking care of their environment. The Chief Executive Officer of Gurapau organization had this to say:

> *This organization has been on the forefront fighting for our rights. I am an El Molo. I had to do something when I realized some aspects of my culture were eroding in favour of Samburu and Turkana culture. We embarked on first documenting indigenous knowledge of language and our foods. Though we have materials on various cultural aspects of our culture, as an organization we have concentrated much on revitalization of El Molo language which has been successful. On the food aspect, we have benefited from the markets and relief food aid. My people suffer, in the past they only consumed fish with a substitute of crocodiles and turtles. You know overconsumption of a particular food has its own repercussions. The economy, modernization and relief food aid has been a blessing to us since now we have diversity of foods. We also live in drought prone area. My only wish is for the government to review the KWCM law so that my people can consume these animals. Can you imagine if the government facilitated hippo hunt or community to hunt crocodiles during this period of Covid-19 pandemic? No one would be complaining of hunger. (Male, Loiyangalani 75 yrs., KII).*

From the study findings, the contemporary El Molo consume foods ranging from rice, chapati (flat bread), ugali (corn meal made from maize), spaghetti, porridge, cereals, githeri- (boiled mixture of beans and maize) as well as other foods consumed in Kenya. They also fry their foods with oil sourced from the shops or fish oil. There is also use of spices to add flavour to the food. Onions and tomatoes are also supplied by local traders in the village or sourced from Loiyangalani town.

Additionally, goats and sheep have replaced the once dominant food item of fish in the rites of passage. Meat cuts from these animals and fats have new symbolic meanings in El Molo culture derived, which are from a fusion of Samburu and Turkana cultures. Although the El Molo have retained their cultural practices on various fish species, some aspects have changed in regard to serving and consumption. Presently fish is served with ugali and sometimes vegetable- cabbages or sukumawiki (kales), unlike in the past. The emergent El Molo food system comprises of market foods and learned cultural practices from neighbouring communities as well as interactions from other communities. These changing cultural practices are being slowly integrated with their indigenous food systems creating a new El Molo food system.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

In this chapter, the study findings are discussed. The discussions draw from other studies in the area of indigenous food systems, their symbolic meanings and the effects of socio-ecological changes on perceptions of indigenous El Molo food systems their symbolic meanings. It follows a thematic sequence and is based on the research and study objectives, which are then linked to the assumptions and the theory that guided the study. The chapter also has a section on conclusions and recommendations.

5.2 Indigenous El Molo food systems

From the findings, different El Molo indigenous food systems are; hippos, crocodiles, turtles, various fish species, fruits from doum palm tree, acacia tree and tooth brush tree and various wild birds' species. A mythical story is told of how in the past, all lake animals belonged to the El Molo community as narrated below:

> *Long time ago, all the lake animals belonged to the El Molo community. These animals were hippos, crocodiles, turtles and fish. The hippos were valued and assumed status of wealth (as cattle in pastoralist communities) while the turtles were considered to be the community's sheep and the crocodiles their goats. The El Molo people, therefore, lived in peace with these animals and also utilized their products for food. One day, a man went to visit his relatives who were living on an island nearby. He used his raft to go across the lake and spent the night on that island. His wife was left behind with the animals (hippos, turtles, crocodile and fish) and she went to lake and asked them to fetch water for her. Apparently, the animals did not understand what she required and, therefore, she threw the gourd in the lake as a gesture to the animals to show them what she wanted. The water took away the gourd and the woman agitated and scared because this was the only gourd that she and her husband had for milking the animals and fetching water. She therefore, asked the animals to go after the gourd and they all swam off in the waters and never came back. Even when the old man returned from his trip and tried to call them back, the animals never came back and thus he blessed them and their life in water. Since then, the aquatic animals became rare in the village. The cordial relationship between the two parties had turned into enmity especially as the man and his wife cursed these animals for not bringing back the gourd (Kiura, 2005; 56).*

5.2.1Hippos

Hippo has been identified as a highly esteemed food source and plays important role in El Molo culture. This facet of El Molo culture is comparable to Ingold (2000) in the context of position of whales among the Inuit people, rice among the Anishinaabeg of Canada and salmon fish among the Colville tribes (Lynn *et al*., 2013) in the hierarchy of food systems symbolism. Likewise, (1989), Holtzman, (2007) and Lokuruka, (2006) show that cattle are highly esteemed food source among the Maasai, Samburu and NgTurkana. Shilabukha (2015) also shows tuna fish and crab as highly valued food among the Giriama. Consequently, the process involved from procurement to consumption of

meat from these animals denotes elaborate rituals professing indigenous peoples' beliefs, values and attitudes (Lupton, 1994; Jones, 2007).

The intimate connection El Molo have with the hippo includes each moiety discussing hippo hunt amongst each other, songs sung in praise of hippo either when the hippo is confirmed dead or when the hunters return to the village. Additionally, songs are formulated and sung while eating hippo meat. All these activities indicate the symbolic importance of hippo among the El Molo (Scherrer, 1978). Similarly, the Inuit of Canada conduct various ritual and ceremonies in hour of whales Inglod (2000). In both communities, the El Molo and the Inuit of Canada, these various activities are symbolic since they are entwined in their social life and reflect stewardship and influence towards these animals that they are in relationship with. Their expertise in hunting this wily animal elucidates themes such as male narcissism, bravery, a network of social relationships, gender roles, status, religion, medicine and identity marker among the El Molo (Geertz, 1973b; Lupton, 1994; Jones, 2007).

Geertz (1973) shows that Balinese cock fight embody their way of life. The cocks were groomed, fed, observed and the people discussed about the cock amongst each other. Additionally, cattle in Maasai (Arhem, 1989), Samburu (Holztman, 2007) and NgTurkana (Lokuruka, 2007) are cherished and taken care of. In contrast, whereas among the Maasai, Samburu and NgTurkana define themselves by the number of cattle one has and these communities practice raiding amongst their neighbours to acquire more herd, this is not the case with the El Molo. Hippo hunt, *njore* or *nyakirim* is meant to bring the two moieties together (Scherrer, 1978). Each hunt expresses different aspects of El Molo culture but the most treasured one is *njore* hunt which is conducted yearly.

Hippos are hunted and consumed on special occasions similar to the Maasai, Samburu and NgTurkana (Arhem, 1989; Holtzman, 2006; Lokuruka, 2007). Among the El Molo, men hunt, slaughter and divide hippo meat according to their customs. Some portion of the meat is cooked and eaten by the men while in the wild whereas other meat portion is carried home. Women are involved in cooking some meat portions. Hippo is deeply tied to El Molo ethnic identity where the moiety forms friendships with the other members outside the clan (Scherrer, 1978).

Similarly, Arhem (1989), Holtzman, (2006) and Lokuruka (2007) concur that only men are in charge of slaughtering cattle's and are exclusively responsible for the allocation of meat portions. The code of meat allocation is an identity marker signifying status, age grades, gender, social relationships and rank of participants when the animal is hunted among the El Molo. In addition, hippo hunt reveal detailed information of El Molo's social, economic and political functions. This is similar to the Maasai,

Samburu and NgTurkana (Scherrer, 1978; Arhem, 1989; Kiura, 2005; Holtzman, 2006; Lokuruka, 2007).

5.2.2 Crocodiles and turtles

Crocodiles and turtles also make an important contribution to indigenous El Molo food systems. Meat from these animals is ordinary food eaten without ceremony and consumed by men, women and children alike. From the mythical narrations, these animals are regarded as representing sheep and goats and they are consumed when available (Scherrer, 1978; Kiura, 2005). Accordingly, the Awajun of Peru substitutes their diet with meat and fish. Similarly, Arhem (1989) notes that honey and honey mead is consumed among the Maasai when available whereas among the Giriama (Shilabukha, 2015), various types of fish are consumed when caught. Among the El Molo, crocodiles and turtles are essential supplementary source of food complementing the monotonous consumption of fish. Significantly, the conduct of sharing meat cuts signifies different forms of relationships in relation to status, age, gender, social relationships and rank of participants when the animal is hunted (Lupton, 1994; Fox, 2013).

Although crocodiles and turtles are regarded as sheep and goats among the El Molo, in other communities Arhem, (1989), Holtzman (2006) and Lokuruka (2007) meat cut from these animals denotes complexities of meanings. Importantly, meat cuts from crocodiles and turtles depicts many ways in which El Molo culture is incorporated in everyday life (Menzies, 2006; Fox, 2013). To exemplify this, hunting expertise associated with crocodile illustrates minor details that deepen the meaning and experience of consuming this animal. Additionally, the taboo involved in consumption of meat from these two animals depicts how El Molo are rooted within their modus operandi incorporating their culture through training and experience (Ingold, 2000; Menzies, 2006).

5.2.3 Various types of fish species consumed by the El Molo

Fish is the common indigenous food among the El Molo. All the various fish species are consumed depending on their availability. This is an equally significant aspect of the indigenous people of Klamath River in California- the Karuk and the Coville tribe whose staple is fish (Lynn *et al*, 2013). Additionally, according to Arhem, (1989), Holtzman (2006) and Lokuruka (2007) the pastoralists' diet consists of milk, meat and blood. Some fish species such as tilapia, Nile perch and *Distichodus niloticus* are held in high regard symbolically as a food source. They are the ideal fish used in most rituals although tilapia is the most preferred fish species. Also, fish food is consumed in all social events from showing hospitality, to feasting and ceremonies (Scherrer, 1978; Kiura, 2005). Therefore, these fish species play different roles in regard to El Molo social order.

On the other hand, preparation of these fish species denotes how the El Molo are embedded in their environment, where their world view is perceived through practice and experience (Menzies, 2006). Specifically, preparation of Nile perch and tiger fish involves elaborate processes illustrating their symbolic importance in the El Molo culture. Tiger fish is revered and serves as food and a weapon whereas fat Nile perch (*iji*) is consumed by men. Consumption of the meat cuts from the various fish species identifies gender, status, age, social relationships, rank and El Molo ethnic identity. These similar sentiments of meat cuts are expressed by Arhem (1989) and Lokuruka (2006) among the Maasai and NgTurkana. Also, Jones (2007) corroborates that although some foods might be classified together, some are regarded to be of upper echelons than others.

The existence of mythical stories of how El Molo learned how to harvest and prepare fish is a testimony to the sentimental value attached to the fish species (Lupton, 1994). According to Ing (2010) globally people recount stories of their indigenous foods and this evokes strong emotions of belongingness. Likewise, songs are formulated and sung in praise of fish. The El Molo also dance mimicking how some fish species behave. Songs, dances and mythical stories acknowledges fish food as an identity marker among the El Molo (Mintz, 1985). Additionally, a mythical story is told of how the El Molo learned how to catch and prepare fish as narrated in the excerpt below;

> *When you wanted fish to eat, they would come to the village and die by your feet. Although there was an abundance of such fish, we became sick after eating them. At this time, we did not clean the Nile Perch (iji) to remove the insides and scales. It was because of madness. One day, the fish did not come when called. All El Molo men from then on were forced to learn how to catch fish. It was only after many attempts that one man learned how. That day he removed all the bad parts and cooked it until it was done and drank the fish broth. He did not get sick. He then taught us, his brothers, how to fish and told us that it was good to clean the fish before eating* it (*Scherrer, 1978; 48-49*);

Therefore, the El Molo understanding of their environment is incorporated into myths, songs and dances, rituals and feasts to preserve and maintain their fish food as one of their indigenous food systems. Moreover, bride price is paid in four logs which are then constructed to a raft used for fishing (Kiura, 2005).

5.2.4 Plant-based and wild birds as an indigenous El Molo food systems

Fruits from doum palm, acacia and toothbrush tree and wild birds make an important contribution to El Molo indigenous food systems. Fruits are consumed when gathered by children and women. This is similar to the Maasai and NgTurkana (Arhem, 1989; Lokuruka, 2006) where wild fruits are consumed especially during times of food scarcity. The fruits however, yield little value on the hierarchy of indigenous El Molo food systems although they are important in their diet in relation to their use as medicine and energy supplement (Kuhnlein *et al*., 2006).

The plants have other uses namely; the trunk of the doum palm tree is used as a log and four of them are joined together to make a raft that is used in fishing, its fronds are used to make ropes, fishing nets, baskets, mats, brooms, thatching houses and dry fronds and the seeds of the fruit are used as firewood among other uses. The community brush their teeth with the small branches of toothbrush tree while acacia tree has medicinal values and the seeds are also used as firewood. The trees depict ecological zone inhabited by the El Molo (Kuhnlein and Receveur, 1996). Also, Lake Turkana is a home to hundreds of birds and only few bird species are considered as food. This depicts El Molo indigenous knowledge of what is considered edible and non-edible. Men and women consume wild bird meat with the exception of few clans that consider it a taboo to consume certain wild birds.

5.3 Indigenous El Molo food systems and their symbolism

For the El Molo, like many indigenous communities, their indigenous food systems are imbued with symbolic meanings. The implication is that they have developed an intricate relationship in regard to their indigenous foods and their ecosystems. This is evident in their customs, rituals and perceptions which are in part shaped by their values, beliefs and attitudes (Jones 2007).

Among the El Molo, indigenous food systems are the very foundational of their identity marker; other key aspects of food symbolism that emerged were; food as medicine, religion, social relationship, rituals, age and gender. Also, for this community, meat apportionment is based on status, respect and rank of participant during the food procurement which all encompasses food symbolism and its meanings. Consequently, meat, soup/broth and fat are a complete meal among the El Molo. Although fish is the main meal, crocodile and turtle meat are a central diet for this community and hippo meat is considered as a ritual food.

From the study findings, indigenous food systems denote all the activities encompassing procurement, preparation, preservation, presentation and performance of food. For this community, food symbolism is the food itself; all animal food is procured from the lake and the ways in which these animals are hunted carry a system of symbolic meanings (Fox, 2013). For instance, procuring hippo involved conducting meetings at various stages where elders were the final decision makers. Hippo hunting required a group of selected individuals and was only procured in the appearance of full moon.

Acquiring this type of food was an affair between the two moieties- *Korchir* and *Marsara*, hunting equipment's are prepared; this type of hunt requires expertise and purity of the body is adhered to as well as songs and rituals are conducted at different stages of procurement. These findings are in tandem with what Ingold (2000) and Tyrell (2008) found among the Inuit. In this community, procuring of whales involved a web of activities that are similar to the El Molo. Similarly, Arhem (1989) and

Lokuruka (2007) agree that procuring cattle illustrates its symbolic importance among the Maasai and NgTurkana in relation to all the processes observed while procuring.

Accordingly, crocodile hunting required expertise as it involves planning on how to approach the crocodile and kill it by spearing the right places. Whereas, a single hunter is able to kill juvenile crocodile on his own while out fishing, this is not the case with matured crocodiles. Large crocodiles are hunted by two or more experienced hunters. On the other hand, hunting turtles involves establishing breeding ground. Turtles are grabbed turned upside down and speared. According to Lokuruka (2007), skills and expertise are required to slaughter a goat. The Samburu slaughter goat and sheep by cutting through the throat whereas NgTurkana spear the animals. The spearing of animals among the NgTurkana is similar to the El Molo culture in hunting of crocodiles and turtles. However, while sheep and goats are reared, crocodiles and turtles breed and grow within the lake.

Additionally, procuring fish involves different methods- the use of baited hooks, spears and fishing nets. Also for the El Molo, the nets are laid out in the afternoon at designated areas and at the dawn of the following morning men net out their catch. Therefore, different fish species are procured at designated lake ecological zones. Menzies (2006) acknowledges that among the Gitga'at of Hartley bay in British Columbia, they have different ways of procuring their seaweed and fish. Shilabukha (2000) and Shilabukha (2015) makes similar observations about the Digo and Giriama sub-commnities of the larger Mijikenda of coastal Kenya. The seaweed is pulled of the rocks as well as digging. Seaweed harvested in this manner indicates its maturity and is of high quality. The Gitga'at community have timetables for procuring fish as well as seaweed. There are also rotational areas designated for procuring their indigenous foods this is similar to El Molo knowledge of procuring fish.

The El Molo also sail to different ecological zones in different time frames to procure their fish. Shilabukha (2015) points out that fishing among the Giriama community is either done on muddy pads or hunted in the deep sea. This community employs different methods of procuring fish found in the mangroves, lagoons and deep sea. There are taboos observed like refrain from sexual intercourse before fishing expedition in the deep sea. Therefore, hunting of hippos, crocodiles and turtles requires expertise and is a male pursuit. Although in the past women fished using nets, they required men's help at different stages of procurement. From this perspective, hunting and fishing in deep waters functions as a symbol of manhood. Accordingly, procuring these foods is a group effort assuming the responsibility of cooperation among the El Molo community members.

Apart from the El Molo describing what is considered food and what is not, the findings bring out the theoretical underpinnings of symbolism is the way food is prepared and consumed. The study findings

indicate that most of the activities centre on food preparation. In this study, preparation entails cutting and cooking of meat. This is reflected in the way hippo, crocodile, turtle and different various fish species meat are prepared and cooked.

In the case of hippo, certain rules are observed like not slaughtering hippo past noon and slaughtering took place close to the lake. Certain parts of hippo meat like *tungurach*- fat on the ribs on both sides, *saiwe*- upper layer of the chest, *kaale*-chest of the hippo, *yerpo*- diaphram, *saalate*-duodenum, *koi*-rectum, *meere*-small intestines, *gulach*-hips of the hippo and ears (*neppe*), tail (*yeauu*) and the frontal tip of the tongue (*reep*) are cuts and set aside before the rest of the carcass is shared amongst the hunters.

Similarly, consumption of hippo meat is not a haphazard affair. These specific parts set aside are cooked and consumed in accordance to their customs. Cooking and consuming these parts involves singing of *seur* song; some of these parts are cooked with tilapia and the hero and his family as well as the two moieties have a share for the set aside hippo meat. This aspect of El Molo culture is akin to the Inuit in the context of whale meat apportionment and consumption.

Among the Inuit, preparation of whale meat was conducted in accordance to their ordered rules. Seasons of hunting whales were times of uniting the communities together as well as sharing (Ingold, 2000). In precisely terms, similar observations have been made among the Gullah women in preparation of rice. In this community, rice preparation and cooking is done differently based on the selection of the grain and types of seasoning used to add flavour (Beuko-Betts, 1995). For the Igbo of Nigeria, preparation of yams is a time for the community to conduct themselves in a decorous manner and thank the gods for this valuable food. The Igbo adhere to their customs to be good steward of the yams for future provisions (Achebe, 1958).

In the case of crocodile preparation, the elders are given the ribs on the both sides and middle part of the tail whereas the main hunter gets the end part of the tail, neck and the upper part of the beginning of the tail (*kartupet*). The helper is given tongue, intestines and lower part of the beginning of the tail (*nyarda*). Elders skin meat on the middle part of the tail and gave the helper bone for soup. For the turtle, the hunter got the two pelvic bones at the back and *gine*- tip nexus to anus) is given to the mother or the wife the people around share the four legs and the intestines. Additionally, fish classification determines preparation and consumption amongst the clan members.

In the past, the two methods of cooking fish among the El Molo was either by boiling or roasting. Similarly, the location in which the fish was procured determined mode of cooking. The preparation of

tiger fish and Nile perch is an example of the elaborate processes involved. Similarly, Arhem (1989), Lokuruka (2006) and Holtzman (2007) recognize that meat cuts from their livestock is crucial arena that is significant in identifying gender, status, age-grade system, age and social relationships. Among these communities' meat cuts varies from animals slaughtered and consumed from home and the ones procured in the bush.

For example, for the NgTurkana, male goat is chosen most of the time; the right pelvic wing is for the first wife, the right hind leg is for the male head of the homestead, the left foreleg is for the eldest daughter in the homestead and the left pelvic wing is for the youngest wife while the neck, thoracic vertebrae and attached muscles are for the neighbours. Furthermore, meat consumed in the bush is a male affair and the colon belongs to the eldest man in the party while the head belongs to the animal donor (Lokuruka, 2006). For the Samburu, when ox is slaughtered, the head was left for the women and among the Maasai, unblemished cattle are ritually slaughtered and meat apportionment is based on age-set rules.

The study findings indicate that the El Molo preserved their indigenous food by sun drying. Additionally, food was presented as meat and broth or just roasted meat. Consumption of indigenous El Molo food system defined spaces. From the study findings, the El Molo consumed two meals in a day where lunch was consumed inside the house whereas evening meals were consumed outside the house. Also, consumption of meals in ceremonies defined spaces.

An example is during hippo hunt and consumption of meals in the life cycle of an El Molo. The upper carapace of the turtle was used as plate while the bone of Nile perch was used as spoon. Then there is seating arrangement while eating that denotes symbolism of status, age and gender. A number of studies such as those of Arhem (1989), Beuko-Betts (1995), Ingold (2000), Lokuruka (2006), Holtzman (2007) have brought to the fore similar aspects of symbolic meanings of indigenous food systems. These studies highlight activities involving from acquisition of indigenous food system to consumption with the perceptions indigenous people have on these activities.

According to Menzies (2006) food is acquired from the environment and is culturally produced which is symbolic. Therefore, the presentation of hierarchical ranking in terms of what attracts more premiums provides a glimpse into the symbolic meanings which are shared in the process of acquisition, preparation and consumption of indigenous food systems among the El Molo, just as is the case with the given examples and other cultures globally. We can see the presence of gender, status, friendship and other connotations of social meanings and cultural symbolisms. These meanings are both apparent and hidden.

For instance, some foods are shared, while others are not shared. This brings out ideas about working together or solitariness when required. Age, gender and occupation are also discernible from the food symbolism. This is clearly brought out in the consumption of the meat set aside; men consumed *saalate*, portion of *saiwe* was preserved for the elderly women who only consumed the meal the following day. In the case of *kaale*, after boiling, men skinned the meat and given to the women the meat. Men consumed the broth whereas women ate the meat and women consumed the tongue. All leftovers were thrown into the lake, the symbolic meaning being the replenishment of the lake.

Consumption of everything would imply greed and selfishness. Also, hippos are seen as sentient beings that share the same social space with the El Molo and other animals. This aspect of El Molo culture is akin to the Inuit (Ingold, 2000). The El Molo observe proper conduct of consuming lake animals to maintain a reciprocal relationship with the animals. El Molo indigenous knowledge of their ecosystem is rich, diverse and vibrant. The knowledge is utilised by the community to adapt to their physical environment, biologically as well as ritually.

The theory that guided this study presumes that culture is the key idea in anthropology and out to be interpreted. As an anthropological study, the perceptive interest was to describe and analyse symbolic meanings by giving a thick description of indigenous El Molo food systems. Geertz (1973a:29) points out; it is a life world in which people live 'one tries to look at behaviour, what people say and make sense of it'. For the purpose of this study, culture is the centre of inquiry in the interrelations between humans and nature. Indigenous food systems through collectively created patterns of meanings in a given society are, therefore, a cultural concept. To this end, the use of interpretive approach of symbolic theory to illustrate meanings El Molo attach to their different indigenous food systems is appropriately situated in the study. For the El Molo they are not interested in the hermeneutics of their different indigenous food systems since they already know what these activities mean to them.

Therefore, the aim of this study was to document and provide knowledge to an outsider of what these activities mean for this community from etic perspective. This study postulated that different indigenous food systems are imbued with symbolic meanings just like other indigenous communities globally. Moreover, the El Molo have experienced changes not only in their eating habits but their entire food system. The changes experienced are partly out of socio-ecological transformation of the physical environment in which they are operand. Else, these changes are attributed to external pressures due to influences from adjacent communities such as the Samburu, Turkana and Rendille.

To this end, indigenous food systems among the El Molo is more than just a means of survival since it signifies a wide range of subjects (Barthes in Counihan and Van Esterik, 2013). Evidence of this is also

found in linguistically naming of their indigenous foods. From the study findings, El Molo food terminology is a repository of their experience and identity since food is a system of communication (Boutard, 2012; Couinihan and Van Esterik, 2013). This tie with the Giriama and Inuit of Canada in regard to their linguistically naming of their indigenous food systems which is imbued with their respective identity because of their cultural embeddedness (Barthes, 1961 in Counihan and Van Esterik, 2013). Additionally, touch, taste and smell of indigenous El Molo food systems has a wide range of emotions linking the El Molo to their language and identity (Boutard, 2012). Barthes 1961 in Counihan and Van Esterik, 2013) observes that food as a system is complex and the ways in which food is acquired, prepared and consumed has meaning that can only decoded based on the immediate context.

Therefore, food terms are intimately linked to culture. From the study findings, it is evident that indigenous El Molo food systems are influenced by cultural perceptions and indigenous knowledge of food. In related studies, Arhem (1989), Lokuruka (2006), Holztman (2007), Boutard (2012) and Barthes in Counihan and Van Esterick, (2013) found that indigenous people are deeply connected with nature and they are kin to each other. Most significantly, their food is acquired within their locus of dwelling and the rituals performed when acquiring, preparing and consuming their foods indicate a history of multiple and complex interactions between man and nature. Therefore, all these activities undertaken are symbolic denoting complexity of meanings.

5.4 Socio-ecological changes and perceptions of indigenous El Molo food system

The study findings show that symbolic meanings of indigenous El Molo food systems are affected by socio- ecological changes. From the study findings, there have been changes in the sizes of fish while some fish species have totally disappeared from the lake or it is rare to fish these species. The El Molo community narrated that fish harvested today are very small compared to the past. These small fish are sometimes detested among some members of the community and when consumed they may not have the same exact meaning as it was in the past. Some of the fish species that have disappeared from the lake are *enyilate*, *Sursur* and *Deehesh*.

These findings are in tandem with what Foley (2005), Lynn *et al* (2013); Ferguson *et al* (2017) found concerning decline on indigenous foods consumption among the Anishnaabeg indigenous people of Canada, Athabascan people of central Alaska, Aboriginals of Australia and the Karuk people of Klamath River in California. These indigenous communities have experienced changes in their diets due to ecological changes. As a result, these changes affect symbolic meanings associated with their indigenous foods.

Additionally, the diet of the Maasai, Samburu and NgTurkana has changed due to ecological changes. These communities are forced to adapt to the changing ecology and also modify their indigenous foods to carry the same meanings as was in the past Arhem (1989), Lokuruka, (2006), Holtzman, (2007). An example is, in the past among the Maasai, men consumed milk (*kule*); due to scarcity of milk men are forced to consume a mixture of milk, maize flour and water which is boiled into a thick gruel (*enkurma*). Initially, this was considered inferior food consumed by women and children but when men are forced to consume they refer *enkurma* as *kule* (Arhem, 1989).

From the study findings, it emerges that globalization and presence of non-governmental organizations providing relief food aid are other factors contributing to dietary change among the El Molo. The construction of roads has led to easier transportation of foods to remote areas. The economy has led to access of variety of foods purchased from stores in Loiyangalani town as well as village shops. This has been complimented by foods donated by non-governmental organization. These foods are readily available and cheap. In this respect, culture is dynamic because El Molo indigenous food systems is evolving and adapting to new foods.

In addition, the El Molo still retain knowledge pertaining from procurement to consumption of fish indicating that culture is also static since some indigenous food systems have persisted. These findings are in tandem with dietary changes among the Fufunati-Tuvalu, Nuxalk Nation in British Columbia and Pwo Karen people of Sanephong community (Kuhnlein and Chotiboriboon, 2022; McCubbin *et al*, 2017). These indigenous communities still retain the knowledge of some of their indigenous food systems an example; Among the Fufunati-Tuvalu, they still retain their consumption of fish. For the Nuxalk Nations in British Columbia, the knowledge pertaining from procurement to consumption of eulachon fish and grease is still present.

Among the Pwo Karen people of Sanephong community rice dish is still their identity marker and this dish is served with other variety of dishes with chili paste still retaining its value.

In their quest to retain their culture as it evolves, the El Molo are now substituting their no longer consumed indigenous foods with other foods. This shows how a community can adapt to changes being experienced and include other foods that are not indigenous to them creating a new food system to have the same symbolic meanings. Other ways of doing things have also been incorporated into El Molo way of life an example is killing of goats/sheep. During rituals, goats /sheep are killed in Turkana way while in the daily domain of food consumption goats/sheep are killed the Samburu way. In this case, there is learning and inheriting specific cultural traits which are in turn incorporated into their way of life.

Also, the El Molo are deriving their new identity from their neighboring communities. For them, keeping goats/sheep means they are no longer considered poor. This means that they can have relations with their neighbors. In the past the use of derogatory word "lomolo" meant that they felt inferior. Now due to them rearing goats and sheep it means they have that identity. They are still seen inferior by surrounding communities who define themselves from the number of cattle and camel an individual has.

Very few El Molo rear cattle. For those who do, the cattle are also kept far away from the villages. At the same time, rearing of other livestock such as goats and sheep points towards adopting an identity from their neighboring communities but doing so cautiously for their survival. Because of changing socio-economic circumstances, the EL Molo have also resorted to purchasing items of food from local markets. Other sources of food also include rations form food donations from the government and local as well as intentional NGOs and UN agencies. These aspects arise from the changing ecological conditions which have seen the community, just like their neighbours, suffer long periods of drought.

Thus, foods purchased from the market as well as that donated are contributing significantly to changes in the El Molo food system, leading to the acquisition of new tastes as well as new ways of cooking and consumption. One of the remarkable result is the increasing consumption of fish with an accompaniment- ugali compared from the past where fish was food in itself. Markets foods are also used as a gift during bride-wealth negotiations. Therefore, social-ecological changes have impacted indigenous El Molo food systems in many positive ways and these changes have led to incorporation of other foods to retain symbolic meanings as well as create new symbolic meanings. The domain of indigenous food system among the El Molo is a space for negotiation based on the available foods. The symbolic meanings of hippo, crocodiles and turtles have not changed.

The study findings indicate that communal and sharing is still practiced among the El Molo. There are still some aspects of individualism where each household purchases food items or fish using their private boats and logs. Each household is the sole beneficiary for a catch unlike in the past where fish belonged to the community. Existence of private and community boats shows individualism among the El Molo. Today fish is commercialized. Still, communal and sharing is still upheld among the community members. In related studies, the Fufunati-Tuvalu uphold the same culture as the El Molo (McCubbin *et al*, 2017).

In summary, different indigenous El Molo food systems are imbued with symbolic meanings and are classified according to their social organization, identity, medicine, age, gender, status and rank of participants. The activities involved from acquisition of food to its consumption reflect their cultural reproduction that eventually preserves their identity. Therefore, indigenous El Molo food systems are a

repository of symbolic meanings conveying a sense of belongingness. Consequently, their ecological knowledge is detailed and intimate leading to a comprehensive knowledge of food distribution throughout the year within their ecosystem.

Further, El Molo people perceptions of their indigenous foods systems are guided by their beliefs, values and attitudes and in the way they acquire, prepare, store, cook and serve their foods. The El Molo view their indigenous food systems as a source of livelihood. Some of their indigenous foods such as hippos, crocodiles and turtles are no longer consumed as they protected by the Kenya Wildlife Conservation Management leading to an erosion of indigenous knowledge on El Molo food system as the older generation die.

Finally, the El Molo have adapted to different realities due to ecological changes and other factors associated with globalization and acculturation that have affected their indigenous food systems as well as symbolic meanings associated with their indigenous food systems. Today's El Molo diet mainly consists of market foods such as; rice, maize flour, sugar, dried beans, spaghetti, cooking oil and millet among others. These foods are also donated by the Government of Kenya as well as non-governmental organizations. Also, although this community consider themselves distinct from others, they have been acculturated to keep and consume other food items from the neighbouring communities such as; domestic birds, goats, sheep and cattle. Today's indigenous El Molo food system is a combination of market foods, foods from neighbouring communities and their indigenous foods creating a new emerging food system.

5.5 Conclusion

The aim of this study was to explore symbolic meanings of indigenous food systems among the El Molo. The study answers the need to document indigenous knowledge that is often undocumented and underutilized. To this end, data were collected on each of the study's objectives that is; Examine El Molo knowledge of their indigenous food systems, symbolic meanings the El Molo attach to different indigenous food systems and impact of socio-ecological changes on El Molo's perceptions of their indigenous food systems and symbolic meanings. The study findings indicate that El Molo indigenous food systems are; hippos, crocodiles, turtles, various fish species found in Lake Turkana, fruits from doum palm trees, tooth brush tree and acacia tree and finally, various wild birds found in lake Turkana. The study findings also show that El Molo indigenous food systems are imbued with symbolic meanings and due to social-ecological changes, this domain is changing creating new emergent food systems among the El Molo.

This study shows how culture influences on what is considered food. More specifically, culturally acceptable methods of procuring, preparing, preserving, cooking, consumption and clearing of the

work station with an aim of meeting food requirements among the El Molo. Indigenous El Molo food system is resilience to their ecology. Yet today, Indigenous El Molo food systems are affected by socio-ecology and acculturation. The El Molo sourced their foods from the lake and their food was communally shared. The El Molo practiced reciprocal relationship with the lake. Today, due to conservation measures and commercialization of fish, the El Molo people prefer to net fish in exchange of money. Their practices concerning fish is still practiced. These practices enhance transfer of knowledge from one generation to the next through practice and experience.

Availability of alternative foods has created a variety of foods enriching their diet. Foods are sourced from the stores and donations by the government as well as non-governmental organizations. Like many indigenous communities, El Molo indigenous knowledge of their foods and their symbolic meanings may be lost due to socio-ecological changes, acculturations and measures imposed by the government. The research findings reveal that this knowledge could be forgotten in the near future since some of the indigenous foods are no longer consumed. Efforts could be made to negotiate on the consumption of these foods.

This can be compared to other indigenous communities such as the Nuxalk of British Columbia and the Pwo Karen of Sanephong. Among these communities, studies have shown how indigenous knowledge of food system has been retained by persistent consumption of indigenous foods. In this way, we can see how indigenous food system encompasses food items sourced from indigenous people's locus of dwelling and are culturally accepted including the social-cultural meanings entailing from procurement to consumption is relevant in documenting indigenous food system symbolism.

The research findings demonstrate the importance of documenting indigenous knowledge and considering social-ecological changes as a factor affecting the domain of indigenous food system. Study findings indicate that indigenous food system symbolism among the El Molo fit in with other indigenous people's food systems globally. This study contributes to our understanding of activities involving indigenous food systems among the El Molo by providing a detailed account of each processes to bring out symbolic meanings. It is important to note however, that this is not a study of indigenous food system in relation to food security or nutrition.

The study of indigenous El Molo food system symbolism shows congruence with dominant narratives of food systems and their symbolism. The findings raise concern on the issue of conservation, which is protecting wildlife for to maintain species diversity. The subject of conservation tends to focus on the benefits of conservation with little focus on effects of conservation on indigenous people or what does

conservation mean to the indigenous people and various ways in which indigenous people conserve their environment.

To be considered too is discourse on food symbolism, which largely focuses on; rituals and taboos, gender, ethnic, national, and classed as well as focus on stories, myths, and narratives to suggest everything encompassing food symbolism. This fails to address symbolic meanings attached to specific stages of indigenous food systems before it reaches the mouth of the consumer. One of the response from conservation management is to limit consumption of indigenous food systems among the indigenous communities. An example is consumption of one hippo yearly. This response is not viable among the El Molo. Understanding what these food means to them and how they conserve the environment is the key in recognizing the importance of indigenous knowledge in development issues.

5.6 Recommendations

From the study, the following recommendations are evident;

5.6.1 Recommendations for further research

- Anthropological research by scholars to document symbolic meanings of indigenous food systems among indigenous communities. The findings reveal El Molo ontological ideations which reveal how they relate with the environment. Therefore, it is important to document this knowledge among other indigenous communities to preserve knowledge also this knowledge can inform development projects.
- Further studies into indigenous foods systems in the context of food security and nutrition. The research focused on indigenous food system symbolism. Indigenous foods are holistic and resilience to their environment, yet for some indigenous communities like El Molo, introduction of food variety is an advantage to them. Therefore, it is imperative to conduct further research on indigenous food system security and nutrition. Most studies acknowledge that with indigenous foods the communities will be food secure and get all recommended nutrition. But it is not the case for all indigenous communities.

5.6.2 Policy Recommendations

- The incorporation of local communities such as the El Molo people, through their indigenous knowledge of Lake Turkana ecosystem in future plans to manage natural resources by government agencies. From the findings, there is a need to conduct more research on symbolism associated with indigenous food systems as an analysis of this lacks scholarly attention.
- Policy instruments should consider incorporation of El Molo values, rights and needs in the areas of conservation, environmental management and public policy

- The needs, aspirations and contributions of local communities and their knowledge on their indigenous foods and other natural resources. This should include issues that concern intellectual property and the appropriation of knowledge. This will facilitate the rapprochement between indigenous communities and other bodies involved in the management of resources in Lake Turkana and anywhere else in the country and the world. In this way, the local communities will not only feel appreciated but this will enhance natural resource management.

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APPENDICES

Appendix I: consent form

Investigator: Wairimu Wanjage

Introduction.

I am **Wairimu Wanjage** from the University of Nairobi, Institute of Anthropology, Gender and African Studies. I am conducting a study entitled: **SYMBOLIC MEANINGS OF INDIGENOUS FOOD SYSTEMS AMONG THE EL MOLO OF LAISAMIS CONSTITUENCY, MARSABIT COUNTY, KENYA.**

Purpose

The study seeks to explore indigenous El Molo food systems and their symbolic meanings. Your participation will add knowledge on symbolic meanings attached to indigenous El Molo food systems.

The information will also provide more insights on impact of socio-ecological changes on symbolic meanings associated with indigenous El Molo food systems.

Confidentiality

Your confidentiality will be maintained at all times and there will be no use of names or any possible identifiers that may connect you with the reports or publications that will be availed as a result of the study.

Voluntarism

Participation in the study is of voluntary in nature and if you choose not to participate you will not be penalized in any way. You will also be free to withdraw from the study at any time and refuse to answer any question that you deem is too personal. However, I humbly request your full participation and cooperation in the study.

Contact persons

In case of any questions you may have regarding the study, you may contact Wairimu Wanjage through telephone number: 0712785252 or email address wanjagew91@students.uonbi.ac.ke. You may also contact my supervisors: Dr. Stevie Nangendo and Dr. Khamati Shilabukha of the Institute of Anthropology, Gender and African Studies, of the University of Nairobi on the telephone number 020-2082530. Your participation in the study will be highly appreciated.

I---------- hereby voluntarily consent to participate in the study. I acknowledge that I have understood the explanation given to me with regard to the nature of the study by ----------. I clearly understand that my role with regard to my participation is completely voluntary.

Signature---------- Date----------

Signature---------- Date----------

Appendix II: In-depth Interview Guide

Bio-data.

Age:

Gender:

Marital status:

Occupation:

Level of education:

Migration of household members:

1. Please list for me foods that are considered indigenous in your community
2. From the above mentioned foods which foods are acquired from land and which are acquired from Water Lake?
3. Please list the most popular indigenous foods in your community in descending order of preference
4. Please list the food item that are consumed regularly
5. Please tell me how many times do you eat in a day?
6. Which food items do you eat in the morning, daytime and evening?
7. Please tell me why you eat that particular food at that particular time?
8. Please describe for me how these foods are harvested, prepared, stored, cooked and served
9. Please list and describe which ceremonies are of cultural importance in your community.
10. Which foods are consumed during these ceremonies? Why is it so?
11. Are there other food items consumed apart from the ones mentioned above?
12. Which animal and plant species are forbidden from consumption?
13. Which food item is taboo for men/women and children?
14. Please tell me what taboos do you observe around food?
15. Which combinations of food are traditionally considered appropriate?
16. In which ways have indigenous food systems changed over the years?

17. Please tell me which indigenous food items have disappeared from the family menu?
18. Please tell me how do you acquire, prepare, and serve food today?
19. Have you experience ecological changes?
20. How has this influenced your eating habits and food choices?
21. Which are the most preferred food items today? (in descending order)
22. Which food combinations are considered appropriate nowadays?
23. How has external cultural influence affected your food acquisition, preparation and consumption?
24. Please tell me the most important indigenous food that have been affected
25. Please tell me how has socio-ecological changes have affected your indigenous foods
26. Please explain to me how you feel about these changes and what measures have you taken to adapt to the changes
27. Please tell me what your thoughts are on the future of indigenous El Molo foods.

THANK YOU FOR YOUR PARTICIPATION

Appendix III: Key informant interview guide

1) Please tell me how long have you lived here and with who?
2) Please tell me what kind of foods are considered indigenous in your community
3) Please tell me what is considered appropriate/ inappropriate diet among the El Molo?
4) Are these foods consumed throughout life or are they consumed at different stages in life, seasons and events?
5) List plant-based food eaten, their use and seasonality
6) List animal-based food consumed, their use and seasonality
7) Please describe for me how the indigenous foods were gathered/ acquired, prepared, stored, cooked and served as well as clearing of the work station
8) Please tell me rules and regulations observed around all the above named activities
9) Please tell me what socio-ecological changes you are witnessing today concerning foods.
10) Please tell me what are you doing to cope up with the changes?

THANK YOU FOR YOUR PARTICIPATION

Appendix IV: Focus group discussions guide.

Bio-data

Sex:

Number of participants:

Group of participants:

Age of participants:

1. Please list for me all foods that are considered indigenous in your community (*Probe for their perceptions on their indigenous foods*)
2. How do you obtain these foods? (Sourced from their ecological dwelling, buy or food obtained from outside community).
3. What are the names of these foods in your mother tongue?
4. Is the consumption of these indigenous foods associated with any meanings?
5. Are these foods eaten every time or are they consumed at a particular time, event or season?
6. Which foods are eaten at a particular time, event or season and why?
7. How are these foods acquired, prepared and consumed? Who prepares these foods and why that particular person?
8. What food items are considered taboo for men, women, and children and why?
9. Are there any other food taboos apart from the ones mentioned above and why are they considered a taboo?
10. What food items are considered appropriate for men, women, and children and why?
11. Which food combinations are considered appropriate/inappropriate for (ritual and ceremonies purposes)?
12. How have socio-ecological changes affected indigenous El Molo food systems?
13. How do you feel about the changes and what are you doing to adapt to the changes?
14. What are your thoughts on the future of indigenous El Molo food systems?

THANK YOU FOR YOUR PARTICIPATION

SIMILARITY INDEX FOR SYMBOLIC MEANINGS OF INDIGENOUS FOOD SYSTEMS AMONG THE EL MOLO OF LAISAMIS CONSTITUENCY, MARSABIT COUNTY, NORTHERN KENYA

ORIGINALITY REPORT

Supervisor: Dr. Khamati Shilabukha

24th October 2023

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SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	erepository.uonbi.ac.ke	Internet Source
2	Submitted to University of Nairobi	Student Paper
3	www.iiste.org	Internet Source
4	erepository.uonbi.ac.ke:8080	Internet Source
5	www.frontiersin.org	Internet Source
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