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**DROUGHT RESILIENCE AND SUSTAINABLE LIVELIHOODS PROGRAMME IN THE  
HORN OF AFRICA (DRSLP) KENYA PROJECT**

**SIMAELELE IRRIGATION SCHEME IN TURKANA**

**FINAL ANTHROPOLOGY REPORT**

**AUGUST, 2015**

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## ACRONYMS

ADB	African Development Bank
ARC	American Red Cross
ASAL	Arid and Semi-Arid Lands
CBO	Community Based Organisation
CBPP	Contagious Bovine Pleuro-Pneumonia
CCPP	Contagious Caprine Pleuro-Pneumonia
DRSLP	Drought Resilience and Sustainable Livelihoods Programme
ECF	East Coast Fever
FGM	Female Genital Mutilation
FMD	Foot and Mouth Disease
KDHS	Kenya Demographic and Health Survey
LMA	Livestock Marketing Association
MoALF	Ministry of Agriculture, Livestock and Fisheries
NGO	Non-Governmental Organisation
PCU	Project Coordinating Unit
PPR	Peste des Petits Ruminants
UN	United Nations
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
WID	Women in Development
WASH	Water Supply, Sanitation and Hygiene
WISP	World Initiative for Sustainable Pastoralism

## 1.0 INTRODUCTION

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This is an anthropology report for Simailele Irrigation Scheme in Turkana County. It is one of the twenty (20) reports that constitute the anthropological and gender study. The study was undertaken in six counties, namely: Baringo, Marsabit, Turkana, Isiolo, West Pokot and Samburu and is supported by the State Department of Agriculture; Ministry of Agriculture, Livestock and Fisheries through the Drought Resilience and Sustainable Livelihoods in the Horn of Africa Project (DRSLP) – Kenya Project. The project implementation period is 2013-2017 and is funded by the African Development Bank. Acacia Consultants Ltd was contracted to undertake the study December, 2014 through to August, 2015.

### 1.1 Background - Turkana County

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Turkana County is located in Kenya's north-western region within Rift Valley region. With an area of nearly 77,000 square kilometres, Turkana is the largest county in the country. Its capital and largest town is Lodwar and it borders Uganda to the west, Sudan to the northwest and Ethiopia to the Northeast. The county also borders West Pokot to the southwest, Samburu to the southeast and Lake Turkana to the east. The greater Turkana County has 855,399 people (male - 52.03% and female - 47.97%), according to the 2009 National Census and is divided into six sub-counties in line with the 2010 constitution requirement. The Turkana people are the largest community in the county, although several other tribes such as El Molo settled there over the years. The Turkana are nomadic pastoralists who mainly keep cattle, donkeys, camels and goats. The animals are their main source of food and wealth. The Turkana are the second largest pastoral community in Kenya after the Maasai. On the other hand, the El-Molo people - who live on the southern shores of Lake Turkana, are the smallest ethnic group in Kenya with a population of about 300 people. They are said to have originated from either Somalia or Ethiopia and are renowned for their fishing and basket weaving skills. Turkana has hosted refugees, mainly from South Sudan, Uganda, Democratic Republic of Congo (DRC) and Ethiopia, for many years. With peace agreement in Sudan, the number of refugees fell, although new refugees were being transferred from Dadaab in Garissa County to Kakuma in Turkana. The number of refugees in Kakuma is currently estimated at 70,000.

Close to 95% of the people living in Turkana County adhere to traditional beliefs and are mainly Christians. Livestock, especially zebu (humped) cattle, are very important in the Turkana culture. They serve both as a source of food (milk, meat and blood) and as a form of traditional currency used to negotiate for brides and dowry payment. Due to the high value placed on livestock, it is common for the Turkana to raid their neighbouring communities - especially the Samburu and Pokot - in effort to enlarge their herds. The Turkana have maintained their traditional way of life, including dressing and traditional religion. The majority of Turkana believe in the god of skies, Akuj, whom they call upon during calamities such as droughts and disease outbreaks. Among the Turkana, men were traditionally responsible for looking after livestock and protecting the community in case of an attack. Women are tasked with constructing huts for their families, taking care of children, fetching firewood and cooking. Children usually look after sheep and goats, although some families take their children to schools. About 122,000 pupils were currently enrolled in the county's 202 primary schools, with another 48,000 students attending high schools<sup>1</sup>

In colonial Kenya, the area was neglected owing to its distant location from the central highlands and the nature of natural resources found there. In 1926, the entire Turkana people were subjugated to a body of the British military that subsequently restricted their movements to an area of Kenya, forcing them to settle in the area known now as the Turkana County. In 1958, the district experienced an influx of a number of people classified as belonging to the Turkana people expelled from the Kenyan settlement of Isiolo town to be forcibly relocated to the then Turkana District by persons of the then British colonial administration. The district maintained an all but complete isolation from influences of any other counties until the time during 1976 when road-blocks on entering the district were ceased.

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<sup>1</sup> <http://www.kenya-information-guide.com/turkana-county.html>

Turkana is one of the driest counties of Kenya. It experiences very high temperatures during the day and moderate temperatures during the night all year round. The temperatures are estimated to be 25-35°C. The county experiences bimodal rainfall pattern ranging from 120mm-450mm annually with an average precipitation of 250mm. Long rains occur in March-May and short rains in October – December. The rainfall pattern is unpredictable and at times Turkana receives no rain in a whole year. As a result, the residents of Turkana County are faced with a persistent threat of starvation due to drought. Typically, Turkana is well known for experiencing annual cycles of alternate floods and drought disasters.

Turkana County has the highest poverty index in Kenya (approximately 93%) and very low participation in schooling at all levels. Within Turkana County, only 18.1% of the population can read and write (*Kenya Country Fact Sheets, December 2010*). The county was one of the counties most affected by the recent drought in northern Kenya. However, in 2013, it was announced by UNESCO that large reserves of groundwater had been discovered in Turkana County. The water was discovered using satellite exploration technology then confirmed by drilling. The extraction of the water began in 2014 and it is being piped to provide water to Lodwar town for the people and also for irrigation purposes<sup>2</sup>

According to the Kenya Open Data Survey 2014 Turkana County was rated as the poorest county in Kenya<sup>3</sup>. The poverty rates in Turkana County stood at 92.9% while the other counties targeted by the DRSLP have more than half of their population living below poverty line. Marsabit County poverty rate stood at 79.3%, Samburu County at 77.7%, West Pokot County at 68.7%, Isiolo County at 63.1% and Baringo County at 58.5%. Assessment reports from government and partners indicate that between 50-70% of the population in Turkana County continue to rely on humanitarian assistance. The county is characterised by poor road network and limited infrastructure, making access to interior regions a challenge.

The county has the lowest human development indices of 0.333, compared to Nairobi's 0.653 and the national 0.561. The literacy rate stands at 16.9% compared to Nairobi's 92% and national 71.4% rates, respectively. School enrolment stands at 39.3% compared to Nairobi's 71.3%. Nationally, life expectancy stands at 56 years while in Turkana it is 42 years (Kenya National Human Development Report 2009). According to the Turkana Development Plan 2002-08, 59% of the population did not have access to safe drinking water, 75% of the population did not have access to basic health facilities, and global acute malnutrition rates for children under five of age exceeds 20% in most areas, which is way above WHO standards of 15%.

The main livelihood in the county is pastoral, which accounts for 60 per cent of the population<sup>4</sup>. Cattle, camels, donkeys, sheep and goats are a major source of income for the Turkana residents. Most Pastoralists sell their animals to the Kenya Meat Commission particularly during severe drought. Other livelihood zones include agro-pastoralism, mainly in the riverine areas of Turkwel and Kerio, which account for 20 percent of the population; fisher folks, situated along the shores of Lake Turkana account for 12 per cent and the formal/casual waged labour/business and trade located in the major towns including Lodwar, Lokichar, Kakuma and Lokichoggio, account for the remaining eight per cent of the population. Fishing is practised in Lake Turkana, mainly by the El Molo people, with Nile perch and tilapia being the main fish species found in the lake. Most fish were dried in the sun before being sold to brokers who come to the lake shores from Kalokol and Lodwar. Basket weaving is also a major income generating activity in the county, especially among women in Lodwar and other urban centres. Recently some Turkana families had begun to grow crops in irrigation schemes along Kerio and Turkwel rivers as a means to fight starvation. Some of the crops grown in the area include cassava, millet and sorghum - which did not require much water and could grow under harsh climatic conditions. Turkana is poised to become the oil-rich county of Kenya due to the recent discovery of commercially viable oil in by British oil

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<sup>2</sup> [http://en.wikipedia.org/wiki/Turkana\\_County](http://en.wikipedia.org/wiki/Turkana_County))

<sup>3</sup> ([www.opendata.go.ke](http://www.opendata.go.ke)).

<sup>4</sup>Turkana County 2013 Long Rains Food Security Assessment Report

firm, Tullow Oil. This great discovery is expected to attract all sorts of businesses and investments into the county.

Turkana County and the surrounding counties of Baringo, Laikipia, Marsabit, Samburu, and West Pokot historically suffer from violent conflicts, including cattle raids (Pragya, 2012). For Turkana County, these conflicts include clan or ethnic-based conflicts, international cross border conflicts, and intra-communal conflicts such as those between two Turkana communities (Krätli & Swift, 1999). The northern and southern portions of the county were the worst affected, particularly Kibbish and Todonyang in Turkana North District, Oropoi, and Lokichoggio in Turkana West District, Lomirai and Kotaruk in Loima, Lochakula and Kapedo in Turkana East District, and Kainuk and Norumoru in Turkana South District

Based on literature review four main contributing sources of conflict and/or stability in Turkana include. (1) environmental stressors including climate change, (2) the Ilemi Triangle boundary dispute, (3) dams and their ecological impacts on the waters of Lake Turkana, and (4) the recent interest in Turkana County by international and local actors attracted by the discovery of oil, plus the recently launched transportation development project called LAPSSSET or 'Lamu Port and New Transport Corridor Development to Southern Sudan and Ethiopia.'

Conflicts over livestock rustling/raids between the Turkana and other groups found in the area had been common over the years. The disputed Ilemi Triangle is home to diverse ethnic groups such as the Didinga and Topasa in South Sudan, and the Inyangatom who move between South Sudan and Ethiopia, and the Dassanech who live east of the triangle in Ethiopia. These pastoral people had historically engaged in raids for each other's livestock with the Turkana (see McCabe, 2004). In the past, traditional weapons such as spears were used in raids but in modern times the groups had been armed with firearms such as AK47s. Within Kenya, interethnic conflicts between the Turkana and neighbouring ethnic groups, such as the Pokot and Samburu, also abound (Bollig, 1990, p. 73).

The conflicts result in tremendous loss of human life, livestock and other property, and the displacement of communities. Conflict areas experienced general disruption of socioeconomic activities and livelihoods, increased economic hardship, high levels of starvation, and increasing dependency on relief food (<http://www.tandfonline.com>). Reports of loss of life are quite common in Kenyan newspapers and in the media. The Turkana and the Pokot, for instance, had a record of near-weekly violent clashes, particularly in Kainuk, Lokichar, and Katilu areas of South Turkana District (BBC, 2013; Bush, 1995; Fratkin, Roth, & Nathan 2004; Pragya, 2012). As late as November 2014, conflicts had been reported between Turkana, Baringo and West Pokot counties. For example during the month of September, 2014, two conflict incidences occurred in Kainuk and Lokori Division where unknown number of goats and sheep were taken by alleged raiders from neighbouring county of West Pokot and East Pokot and on first of November 2015, nineteen police officers were killed, 22 firearms stolen by suspected armed Pokot bandits in Kapedo area of Baringo County. Due to this wave of insecurity Kenya Defence Forces were deployed in joint disarmament operation with police to recover stolen firearms and quell the conflicts (<http://www.crisisgroup.org>).

Irrigation had been practised for more than 500 years in Turkana County. Before the arrival of the British colonialists the Turkana practised opportunistic flood cultivation along the rivers. The colonial Government initiated small small-scale irrigation schemes in Turkana to mainly feed Mau Mau prisoners. Development partners, particularly the UN, FAO, UNDP, and NORAD and the Kenyan government initiated small-scale irrigation schemes along River Turkwel to deal with increased food insecurity in Turkana County. In the 1960s, the Government settled drought ravaged Turkana pastoralists in Turkwel Irrigation Scheme. Later, many other schemes, including Kaputir, Katilu and Morulem were started.

Currently, irrigated agriculture is practised in more than 30 irrigation schemes along rivers Turkwel and Kerio. Examples of areas with irrigation schemes include Katilu, Turkwel, Kalemunyang, Nakwamoru, Juluk Lokori and Kaptir along the River Turkwel and Lotubai, Elelea and Morulem irrigation schemes along River Kerio. Some limited irrigation is carried along seasonal rivers such as Tarach. Many different crops are grown under irrigation. These include maize, cowpeas, sorghum, green grams, bananas,

mangoes, kales, pumpkins, watermelons, tomatoes, sweet potato, carrots, oranges and guavas. Maize and sorghum are the principal crops grown as they represent 80% of irrigated crops. Most schemes employ the use of flat basin techniques to apply water onto their farms. Farmers found out that burning trash in saline fields reduce soil salinity problem. Grains and leaves of cowpea, and leaves and fruits of pumpkins are utilised. Fresh sorghum grains are eaten while the sorghum stem is chewed like sugarcane.

Irrigated area in Turkana County is estimated to be 2,663 ha, but the irrigation potential is 16,600 ha. Each household cultivates about 0.4 acres, which is not adequate for farmers' food needs. Currently, the schemes were producing over 12,000 tons of grain per year. There is high demand for irrigated land particularly by persons disposed of animals by drought, disease outbreaks or cattle rustling.

The DRSLP area of focus in Turkana County is Turkana South and Loima sub-counties. Simailele Irrigation Scheme is located in Turkana South Sub County.

## **1.2 Background - Simailele Irrigation Scheme**

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Simailele Irrigation Scheme is a relatively recent intervention located in Turkana South, although the community had for long practised small-scale irrigation along River Turkwell for food crops such as sorghum and maize. The scheme was started in 2009 by the Anglican Church of Kenya (ACK) which put up a permanent intake in 2013 and established a 2km earth canal. The Turkana Rehabilitation Programme (TRP) thereafter lined the canal to reduce loss of irrigation water through seepage. The community donated land for irrigation. Each farmer had 0.25 acres under irrigation. The total land under irrigation was 100 acres, covering 400 households. There were plans to open up another 700 acres for irrigation. Households from polygamous families were treated as separate units. The source river is permanent.

The scheme had a water users' association committee of 15 (10 men, 5 women). The functions of the association included: clearing of bushes; repair and maintenance of canals; and resolution of conflicts over water. The committee did not charge membership fee because the Turkana community consider water a free commodity and would resist any levies. The committee met once a month when the scheme was active. It had a constitution but by-laws had not been implemented.

The executive committee was made up of 40% women *vis*: chair (male), vice-chair (male), secretary (male), vice-secretary (female) and treasurer (female). Women were preferred for the position of treasurer because they were less likely to embezzle funds as they minded about their reputation. On the other hand, the position of chair was seen as suitable for a man because it required authority and assertiveness. Respondents indicated that a female chair was more likely to be ignored by men because the Turkana culture place women lower than men in the pecking order. The scheme also had a foreman and a deputy (both men) to monitor what happened in the scheme and report to the committee promptly. Some of the problems to report included destruction of crops by wildlife and blockage of the canal.

## **1.3 Objectives of the Study**

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1. To carry out a detailed study of socio-cultural and socio-economic dynamics of all the communities in the project area including:
  - ✚ Detailed information about communities, their way of life and relations;
  - ✚ Capture the cultural variations and stratifications;
  - ✚ Capture the different religious practices and the impact on the other religious groups;
2. To capture in detail the types and sources of livelihoods and average income of households and disaggregate the information gender-wise, capturing male and female and child headed households;

3. To study and document the various social, economic and political organisations and the power relations among them;
4. To study in detail the most sensitive issues of the different communities' types of conflicts and ethnic differences, their sources, local solving mechanisms of resolving conflicts and communities' coping strategies and their effects on men and women;
5. To identify the common foods and eating habits, common diseases, including HIV/AIDS and nutritional related, their possible causes and any gender differentials;
6. To give in detail the land and livestock ownership systems, sizes, and any related sensitive issues concerning the said resources;
7. To enhance the capacity of staff (both PCU and field) in relevant anthropological issues and data collection. Identify training needs for both staffs and farmers in the areas of anthropology; and
8. To capture historical relationships of the communities' participation with development partners in the context of empowerment and support in addressing food security issues.

#### **1.4 Scope of the Study**

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This report captures information from Simailele Irrigation Scheme in Turkana County. Going by the objectives of the study, it presents findings on the social cultural dynamics in the scheme (ethnic composition, cultural interactions and resultant behaviour, and rites of passage); economic organisation (land as source of livelihood, agricultural activities- livestock and crop production, water distribution, average incomes, and labour); political economy of the scheme; sensitive land/ water issues and conflict resolution mechanisms; morbidity and culinary habits of the people- nutrition, WASH, morbidity and causes of morbidity, and health facilities. Finally, it provides conclusions and recommendations to enable all groups to participate, contribute and benefit from the project equally.

## 2.0 STUDY FINDINGS

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The study findings are presented in the following sections: 1) social cultural dynamics, 2) economic organisation, 3) the political economy of the scheme, 4) sensitive land, water conflict and conflict management systems, 5) morbidity and culinary habits of the people, 6) ownership of resources, and 7) capacity and the training needs of the farmers and County staff.

The study used both qualitative and quantitative data gathering tools. A total of 91 members of households were interviewed (54.5% male, 45.5% female). The male headed households interviewed were 89.7%, while 10.3% were female headed households. All respondents interviewed were beneficiaries of the scheme. Focus Group Discussions (FGDs) and Key Informant Interviews (KIIs) were also conducted to corroborate the statistical data obtained from the household survey. On average, the households interviewed indicated that they had lived in the scheme for a period of 17 years. They were, therefore, well informed about the social dynamics, economic potential and threats of the scheme.

### 2.1 Social Cultural Dynamics in the Scheme

---

This anthropological study found out that the main ethnic composition of the scheme was largely the Turkana and a few Borana.

Culturally, the respondents were in agreement that Turkana could be easily identified through markings (45.9%), language accent (17.8 %) and use of *shukas* by morans (17.3%). Accounting for the remaining 19% on cultural identification were removal of two lower incisor teeth, naming, *rungu*, traditional ceremonies, wearing of *akaala*, piercing, carrying their small seats e.g. *churudugi*, wearing of *shangas*, wearing of skin, carrying fly whisk and house design. The Turkana valued the clan system. There were over 20 clans each with a distinct brand name and traits. The clans served as glue to hold the society together. Though the role of clans may have been diluted by modernity and the flax way of living, the clans in Simailele were identified as being crucial in terms of settling disputes (81%) and exercising reciprocity in helping needy kin members (19%) such as in case of droughts and famines, a trait that the Turkana clans were known for.

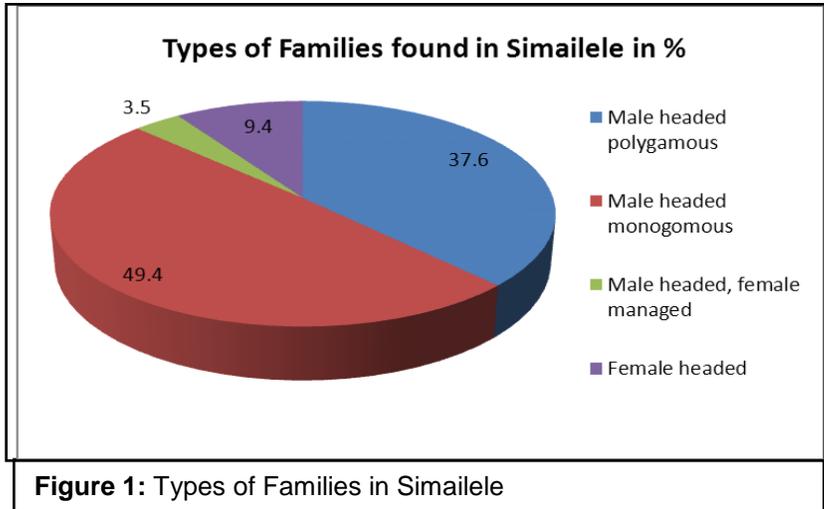
From a cultural point of view, women were perceived as being inconsequential in the running of family and community matters. But in essence, they were key, critical and pivotal in running community affairs. Women kept food and distributed it to the rest of the communities. All butchering was done by women, at home and in commercial abattoirs. During fieldwork, women slaughtered, be-headed, skinned and cut animal parts into meat even in commercial abattoirs.

#### 2.1.1 Household Headship

Men were the heads of households and were succeeded by their sons on death by tradition of the Turkana community. The principle sign of male authority was the traditional stool (*Ekicholong*) which women were not allowed to sit on. One who did so was considered to be bent on estranging her husband. In Simailele, the relationship status was as follow: 91% married, 7% widowed, 1% single and 1% separated/divorced. Men had one to five wives (majority had two wives) and households had seven to eight children per wife.

In practice, women were technically the de facto heads of households, as men usually migrated for substantial periods of time with livestock. They were accompanied by male youth. This meant that only elders, boys, girls and women were permanently available in the household. The unit for mobilising productive labour was the household in all types of marriage.

Both polygamy and monogamy were practised with some men having at least two wives. Majority of the respondents (49.4%) came from male headed monogamous marriages, followed by male headed polygamous marriages (37.6%), female headed households (9.41%), while male headed but female managed households accounted for 3.5%). Reasons for polygamy included: to checkmate a defiant wife; barrenness (although this was not common); search for male children when wife keeps on getting only girls (boys were required for security and inheritance); production of family labour; qualification for community leadership (a polygamist was regarded as having better management skills learnt from managing his wives and children); and prestige for men. **Figure 1** highlights the different types of families found in Simailele.



Men did not like their wives attending family planning clinics. If a polygamous husband died, the son of the first wife took care of the family. Widow inheritance was practised but was declining. Polygamy was seen to confer status on men and was also a way of generating family labour. Essentially, productive labour was derived from the family members.

Boys and girls were given equal opportunities to attend school. Boys who did not go to school as well as the brave ones were allocated grazing duties. Fathers decided on one son to look after livestock. They normally looked for the quick and aggressive one who could protect the animals.

### 2.1.2 Religious Practices

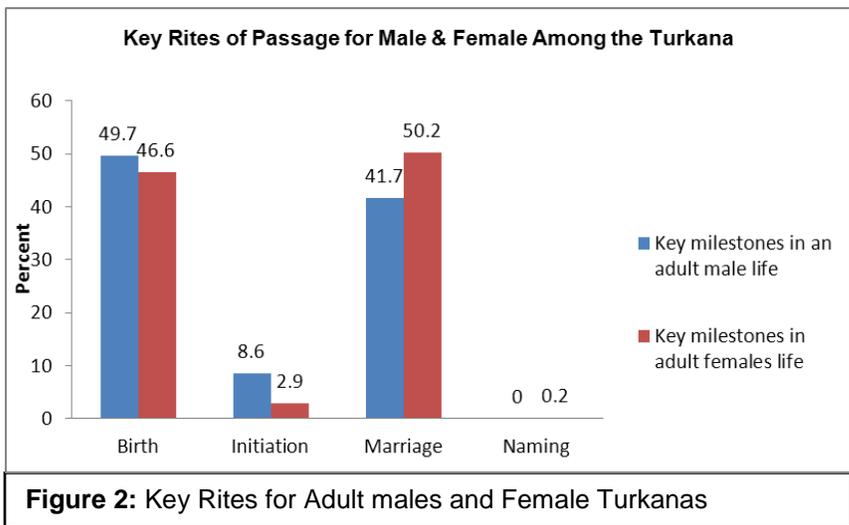
Majority of people in Simailele scheme reported to be Christians (95.4%) while the remaining (4.6%) practise Traditional African Religion (TAR). Although majority reported to be Christians FGD discussion showed that they still practised some form of TAR. For example though fearless in all aspects, the Turkana were highly superstitious. They believed in dreams and placed great faith in diviners (emurons) who had the power to heal the sick, make rain, and tell fortunes (by casting sandals or reading animal intestines). The Turkana believed in a single, all-powerful god, Akuj, who rarely intervenes in human affairs. The Turkana were sceptical of any diviner who professes to have mystical powers but failed to demonstrate that power in everyday life.

### 2.1.3 Key Rites of passage

The rite of passage for boys to be recognised as responsible men was called “Asapan” meaning “re-birth”. The young men were taken to an area with trees; a ram or a he-goat was speared ceremoniously to death and then roasted without skinning and eaten by those being initiated and their mentors. The initiates were sprinkled with intestinal contents. Each of the mentors (men) took the boy home where the initiate changed all the clothes, the head was shaved, mud smeared on the head and a feather (usually from ostrich) was put on the head. The young men stayed with their mentors for about three days and then went home. The “new father” gave the initiate some livestock (3-4 goats) depending on his wealth rank. The initiate started renaming items and people anew as if he was meeting them for the first time.

There was no equivalent rite of passage for girls. Normally, a girl was said to be growing into a woman when the breasts developed, actively worked with the mother, interacted frequently with boys and menstruated. But the community removed the girls’ two lower front teeth at around age 15 for aesthetic purposes. **Figure 2** shows different rites of passage among the adult male and females of the Turkana community. Birth and marriage were the main rites reported.

Girls married at age 20-25. The father of the potential groom made contact with the potential bride's father and the parents negotiated on behalf of their sons and daughters. Once an agreement was reached between the parents, the prospective groom and bride were encouraged by their respective parents to talk to each other and agree to marry. Once the bride and groom had agreed to marry, the groom's parents took sugar, tobacco and 6 sheep to seal the agreement. Increasingly, young men and women were also starting friendships and then seeking consent for marriage from parents. Older suitors may seek consent directly from the woman's father.



**Figure 2:** Key Rites for Adult males and Female Turkanas

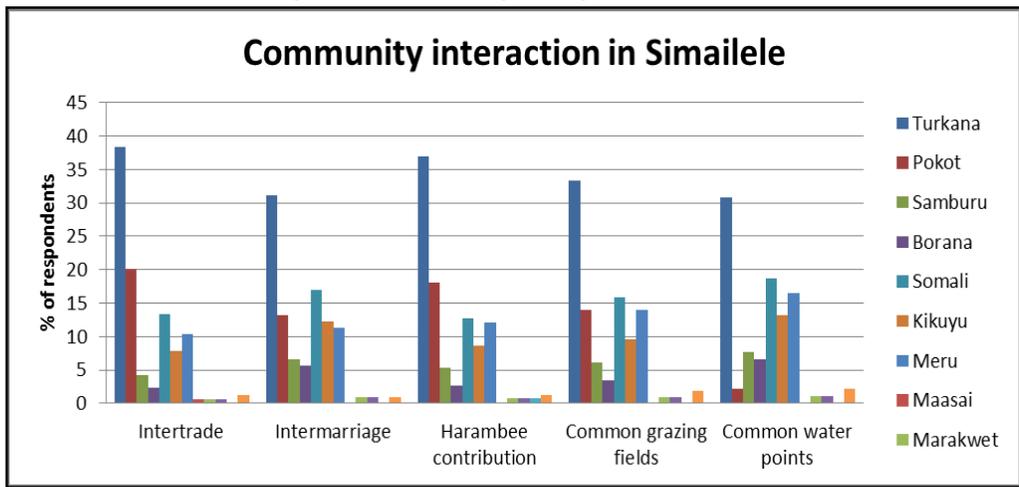
Among the Turkana, people could not marry among members of their own and mother's biological clans. Promiscuity was frowned upon and often punished. It was believed that a friend of an adulterous man drowned if they crossed a river together. The sexuality of girls was controlled by the father, brothers and mother while that of the boys was controlled by the father.

One man could marry between one and five wives depending on his wealth. Majority had two wives. Polygamy was seen to confer status on men and was also a way of generating family labour. If a polygamous husband died, the son of the first wife took care of the family. Widow inheritance was practised, but it was declining. The average number of children in household was 9-10. Men did not like their women attending family planning clinics. Fathers decided on which child in charge of looking after livestock. They normally looked for the quick, aggressive and delinquent ones who could protect the animals. The rest of the boys and girls were allowed to go to school.

2.1.4 Interaction with other Communities

The Turkana's interacted with other communities in several areas including inter-trade, contributions in harambees, marriage and sharing of grazing fields. **Figure 3** depicts inter community relationship in areas of trade, marriage, harambees and sharing of resources (grazing, water etc). Turkana's interacted mainly with Pokots, Somalia, Kikuyu and Meru communities as highlighted in **Figure 3**. This was in inter-trade, inter-marriage, harambee contribution and sharing of natural resources such as grazing land and water.

However it was noted that majority of Turkanas did not share water points with Pokots. Only a small percentage of Turkana's (2.2%) indicated to share water resources with Pokots. An interesting observation was that; despite



**Figure 3:** Interaction with other communities

despite

Turkanas' and Pokots reported being arch-enemies; there were more interactions between the two than with other communities. Perhaps this could be explained by the fact that they were close neighbours and many times they made peace.

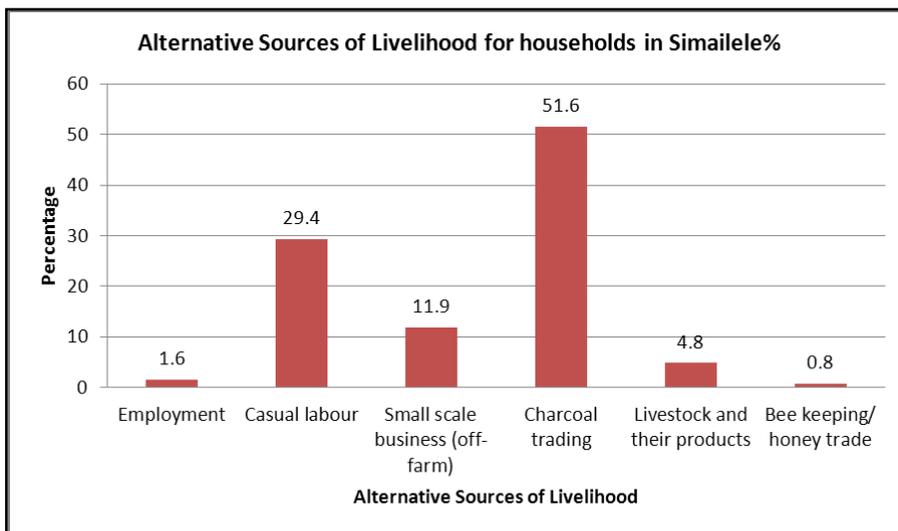
Other communities present at the scheme were; Maasai, Marakwet, Tugens, Luo's, Borana and Samburu. The household data indicated low interaction. For example Turkanas interaction with Marakwet in trade, intermarriage, harambee contribution and sharing natural resources averaged a low of 5%.

## 2.2 Economic Organisation

This section looks at sources of livelihoods, including land, crops grown, livestock, water distribution and income and labour distribution.

### 2.2.1 Type of Livelihoods in Simailele Scheme

The main source of livelihood for the community was crop production (90.1%), livestock production was also practiced and it represented 9.9% of the population in Simailele. The type of agriculture practiced was irrigated agriculture (74.6%) and river bed agriculture (25.4%). For livestock production, nomadic pastoralism was mainly practiced (85.7%). Agropastoralism represented 14.3% of the residents in Simailele.

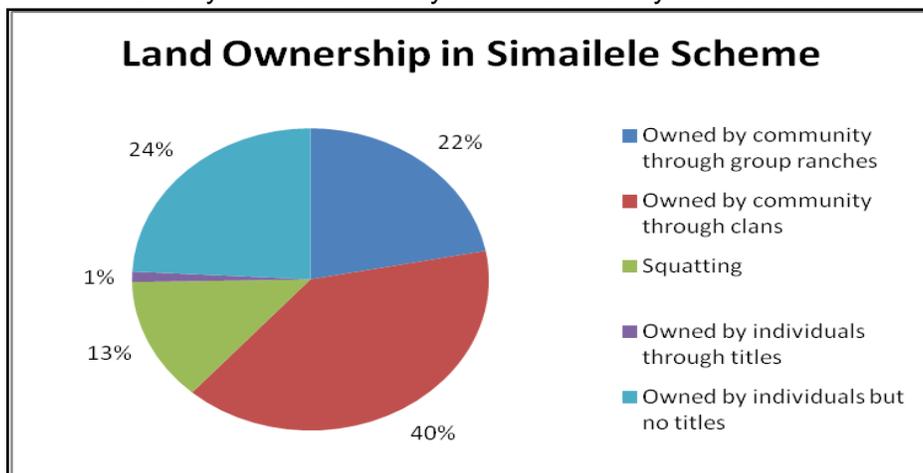


**Figure 4** summarises alternative sources of livelihoods for the Simailele households. It indicates that majority respondents were engaged in charcoal trading (51.6%), casual labourers (29.4%), small-scale business (11.9%), livestock and their products (4.8%), formal employment (1.6%) and beekeeping (0.8%)

**Figure 4:** Alternative Sources of Livelihoods for Simailele Residents

### 2.2.2 Land as Source of livelihood

Turkana County's land tenure system was mainly based on communal land ownership as indicated in



**Figure 5.** Land ownership at Simailele Irrigation Scheme was largely communal through clans at 40% and by communal land ownership through group ranches at 22%. Clan elders controlled land use, but individuals had traditional ownership rights on small plots along the river flood plains where they practised rain-fed and small scale irrigated crop production. Total land acreage under irrigation was 100 acres, representing 400 farm families.

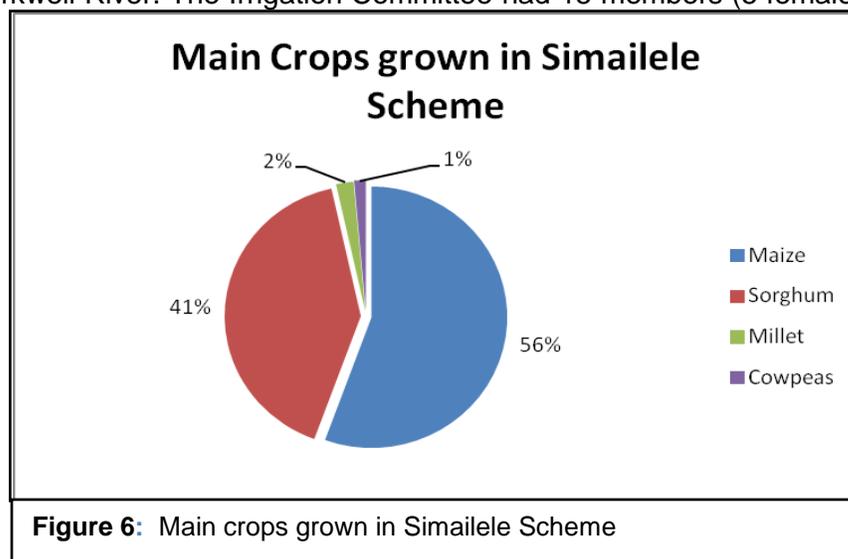
**Figure 5:** Land Tenure in Simailele Scheme

### 2.2.3 Crop Production

Crop production was the main source of livelihood in the area. Crops grown included sorghum, maize, green grams, cowpeas, kales, cabbages, pumpkins, bananas, watermelon, tomatoes, sweet potato, carrots and oranges under rain-fed agriculture. The Ministry of Agriculture introduced improved bananas and freely gave out seeds for maize, sorghum and tomato. Very minimal use of fertilizer and organic manure to increase crop yield was noted. However, this was countered by planting drought resistant crops and use of high yield crops. **Figure 6** shows the main crops grown at the scheme.

Members of the scheme planned to continue growing all the listed crops as well as forage under irrigation. Water was obtained from Turkwell River. The Irrigation Committee had 15 members (5 female, 10 male). The officials, by gender, were: chair (male), vice-chair (male), secretary (male), vice-secretary (female), treasurer (female), foreman (male) and vice-foreman (male). The foreman manages activities of the scheme.

Challenges related to crop farming were: erosion; uneven land surface in some places; invasion by warthogs, locusts and stalk borer; shortage of farming implements; limited knowledge on irrigation crop production and handling of crops; lack of fertilizers and other inputs; water from the lagger overflowing into plots; poor distribution of irrigation water due to high elevation; and reluctance to pay scheme membership fees.



**Figure 6:** Main crops grown in Simailele Scheme

Other general challenges in irrigation schemes were identified as:

- ✚ Destruction of crops by livestock and wild animals due to inadequate fencing of irrigated plots.
- ✚ Pests and diseases caused by short fallow periods of less than 3 months. Pests included stem borers, army ants and locusts.
- ✚ Nutrient mining and declining soil fertility. Farmers lacked fertilizer inputs.
- ✚ Heavy manual work in the face of diminished labour as more and more young people went to schools. Land in some parts of the scheme was not levelled and thus required a lot of labour for levelling.
- ✚ Lack of mechanisation. No use of animal power to cultivate land. Require use of tractors for cultivation and pan- breaking equipment. Farmers also had shortage of cultivation tools e.g. jembe, rakes and slashes.
- ✚ Soil compaction and salinization due to continued use of basin irrigation. Most schemes lacked drainage network thus making salts to accumulate in the irrigation fields. Thus, low yields were reported under basin irrigation compared to furrow irrigation.
- ✚ Break down of canals and high costs of their maintenance.
- ✚ Soil erosion.
- ✚ Invasion of farm land and pastures by *Prosopis juliflora* (Mathenge).
- ✚ Soil salinity was sometimes a problem along the Kerio and Turkwel rivers.
- ✚ The intake areas were prone to flooding and change of the river courses.
- ✚ Lack of capacity to effectively manage the irrigation scheme.
- ✚ Lack of technical capacity in irrigated crop management.
- ✚ Dependency syndrome - dependence on Government and NGOs to cultivate own land.
- ✚ Flooding of scheme by *Karemngorok* lagger.

## 2.2.4 Livestock Production

Within this irrigation scheme, livestock keeping was a secondary source of livelihood. The situation had been occasioned by frequent raids by the Pokot and livestock diseases. The animals kept ranked in descending order of significance were goats, sheep, cattle and camels. Ranked by significance in payment of bride wealth, the camel came first followed by cattle, goat/sheep and donkey. Goats were considered valuable because they could easily be sold or slaughtered. Camels were valued because they produced milk for a long time. These two animals also survived well in harsh environments. Chicken was ranked last among the livestock. However, the potential of chicken as a source of income for women was illustrated by the presence at Nalemsekon centre of a chicken project by Neema Women's Group with about 800 layers.

Traditionally, goats/sheep, cattle, donkeys and camels were owned by men while women were allowed to keep and own chicken. Wives could take custody of small stock (sheep and goats) but they had no control; they had to consult their husbands whenever they wished to do something with the animals. Persons with large livestock herds were perceived to be rich while those without were perceived to be poor. In terms of wealth ranking, a rich person had 60 goats/sheep, 10 camels and five donkeys. A poor one had five goats/sheep, one camel and one to three donkeys.

Men normally consulted their wives when they wanted to sell animals and also on how to use money from the sales. The main uses of income were: school fees; starting/expanding business; hiring farm labour; animal health; family health; and buying more livestock. Women were in full control of chickens which they could slaughter for home consumption or sell in the market without the husband's express permission.



Photo 1: Buyers and sellers in Lodwar Livestock Market

There were sale yards at Lokichar and Katilu and a small slaughter house/slab at Lokichar that handled up to 20 goats/sheep per day. Brokers bought livestock from homesteads and took them to the market. **Photo 1** shows a section of the Lodwar Livestock market. Livestock prices are shown in **Table 1**

below:

**Table 1:** Prices of Livestock

Stock type	Price in Kshs
Cattle	Big (28,000-30,000), medium (20,000-25,000), small (10,000)
Heifer	16,000
Goat	Big (7,000-8,000), medium (5,000-5,500), small (2,000-3,000).
Sheep	Big (5,000-6,000), medium (2,500-4,000), small (2,000). At Katilu, sheep fetch double these prices.
Camel	17,000-30,000
Donkey	15,000
Chicken	500-1,000

The Lokichar market operated daily, although Tuesday was the designated market day. The average weekly sales were as follows: cattle (30), sheep/goats (400), camels (7) and donkeys (30-40). There was another sale yard at Kalemng'orok. Animals bought were taken to Tullow Oil Company, Chepareria market in West Pokot and Lomidat Slaughterhouse in Lokichoggio. Hides and skins derived from home slaughter were sold to traders. **Photo 2** shows a woman skinning a bull in Lodwar livestock market.

Those not sold were used as bedding, for thatching huts, and making sheaths for swords and local shoes. Challenges in livestock production and marketing were: droughts which occasion movement of livestock to areas with pasture and water; diseases such as pneumonia, CCPP, CBPP and PPR; and inadequate market for goats in Nairobi.

The sale yard at Katilu was established in 2004 by 30 members. The membership at the time of study was 110 (62 men and 48 women) as from 2007. There were 11 committee members (6 men, 5 women) distributed as follows: chair (male), vice-chair (female), secretary (male), vice-secretary (female) and treasurer (male). The sale yard was small. Members intended to establish a bigger one on a new site. It operated daily. Goats, sheep and donkeys, in that order, were the livestock types most frequently sold in the following



Photo 2: Woman skins bull in Lodwar Market

approximate numbers: sheep/goats (100), cattle (10-25), donkeys (2-4) and camels (2-5). The Livestock Marketing Association (LMA) that managed it was formed in 1997. It had a membership of 62 (5 women, 57 men). Respondents averred that women did not like livestock business. The Sale Yard Committee had 11 members (4 women, 7 men) while the Water Users Committee had 11 members (2 women, 9 men).

The yard was first constructed by the Arid Lands Resource Management Project (ALRMP), the predecessor of the National Drought Management Authority (NDMA) in 1997 and later rehabilitated by Kainuk Food Security Project, supported by World Vision, USAID, ARC, and Arid and Marginal Lands Recovery Consortium in 2007. It occupied an area of 10 acres. The yard did not have an auction yard, water, offices and toilets.

*Challenges related to livestock production were;*

**Livestock diseases:** The diseases affecting livestock species were: cattle (trypanosomosis, FMD, anthrax); sheep/goats (PPR, CCPP, mange); camels (trypanosomosis, haemorrhagic septicemia, mange); and donkeys (trypanosomosis and plant poisoning from prosopis seeds).

**Access to government veterinary drugs:** Livestock keepers bought drugs from agro-vet shops in Katilu, Lokichar or Lodwar and administered treatment themselves. Only in cases of serious disease did they seek professional veterinary assistance from Lodwar. The quality of some drugs was poor, but prices were generally affordable. Livestock owners would prefer to use quality animal health services provided by qualified professionals, but these were only available in Lodwar. Vaccinations were carried out by government veterinarians. There were a few community-based animal health workers rendering services to the community. At Simailele, there were two of them (one male, one female). Ethno-veterinary medicine was used to some extent e.g. herbs to treat retained placenta. Aloe Vera and Neem were used for non-specific treatment.

**Culture barring women from owning livestock:** The main constraint women faced with regard to livestock resources was the culture which bars them from owning and controlling animals. That they

could not make decisions over them meant they could not liquidate, dispose of or individually utilise them as production assets. The window of opportunity lay, however, in the fact that husbands normally consulted wives before disposal and on use of incomes generated, which meant that the wives may influence decisions. Particularly disadvantaged were widows, especially those whose marriages were not formalised traditionally who were completely disinherited of the deceased husband's property.

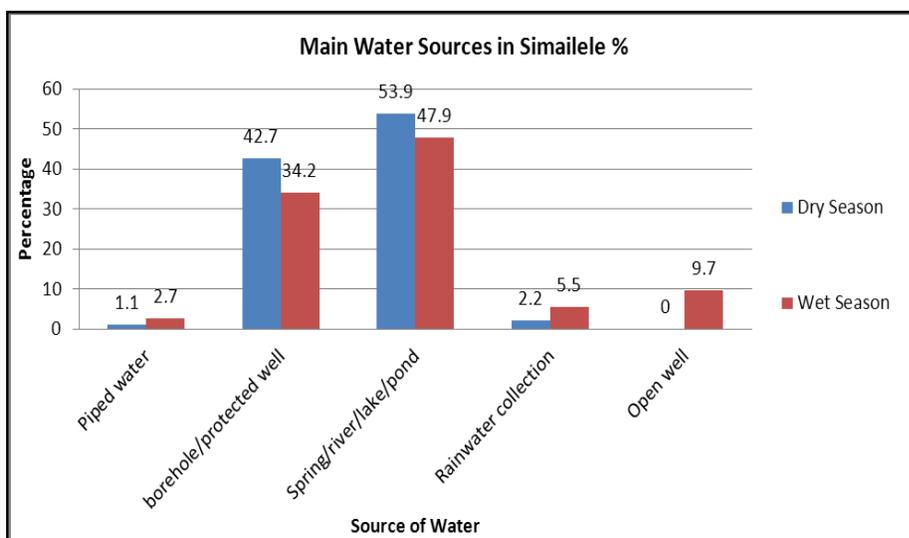
**Cattle rustling:** For men, the main challenge lay in vulnerability caused by attacks by raiders and potential loss from livestock diseases. That they self-treat animals and only seek professional assistance in serious cases could mean that it was sometimes too late. It was certain that cattle ranked as the most economically important livestock and hence anything that interfered with them created a serious vulnerability among the owners. This was the case as it was the prime target of cattle raiders. The attacks occasioned loss of lives, destruction of infrastructure and inability to go to markets, all which contributed to minimising the economic value of the livestock as well as the sustenance of production.

**Other challenges were:** inadequate market information; inadequate transport; poor road conditions; theft en-route to the market by fellow Turkana and through raids by the Pokot; low prices at the Lomidat slaughterhouse; inadequate grass under irrigation; and inadequate access to credit.

### 2.2.5 Water Distribution

The supply of water was unreliable given that rivers Turkwell and Kerio depended on rainfall from the highlands. If rains failed, the schemes automatically failed unless serious measures were taken to stabilise supply by, for instance, damming. River Kerio could sometimes dry up for a whole year. In the recent past, it had been dry for three months continuously. Turkwell was more stable because of damming. Wells dried up during drought due to the lower water table. Most water pans dried up before the next rains since they were small in size and did not hold significant amounts of water. The rivers also changed course hence scarcity of water in areas that received it before.

**Figure 7** shows the main sources of water for Simailele Irrigation Scheme:



**Figure 7:** Main Sources of Water in Simailele Scheme

The study found that respondents took an average of 86 minutes to reach a water source during the dry season and an average of 72 minutes during the wet season. The main challenge faced in accessing water during the dry season was conflicts associated with water uses. Other challenges included lack of clean water for domestic use (21.3%), power management of water sources (16%), low water allocation (14.2%), price increase (5.8%) and ownership (4%).

### 2.2.6 Average Incomes

The findings of the study showed that with time the Turkana had turned to other alternative sources of income. These included charcoal trading (51.6%); casual labourers represent 29.4%, small-scale business (11.9%), livestock and their products (4.8%), formal employment (1.6%) and beekeeping (0.8%) Table 3 depicts alternative sources of income.

**Table 2: Alternative Sources of Income**

<b>Alternative Source of livelihoods</b>	<b>Beneficiary</b>
Employment	Men and women
Casual labour	Men and women
Small scale business (off-farm)	Men and women
Charcoal trading	Men and women
Livestock and their products	Men and women
Bee keeping/ honey trade	men
<b>Total</b>	

The salient alternative sources of income are discussed below:

**Charcoal:** This was found to be a major source of income for women. Household data revealed that 51.6% of respondents had charcoal alternative livelihoods and was the most preferred by 25% of the respondents. The 57% of the female headed households relied on charcoal compared to 37.9% from male headed households. Even though charcoal was a source of income for the households, it was a major environmental challenge for the scheme. The project could promote production of “environmental friendly charcoals” by promoting growing of quick maturing trees that could be harvested for charcoal production.

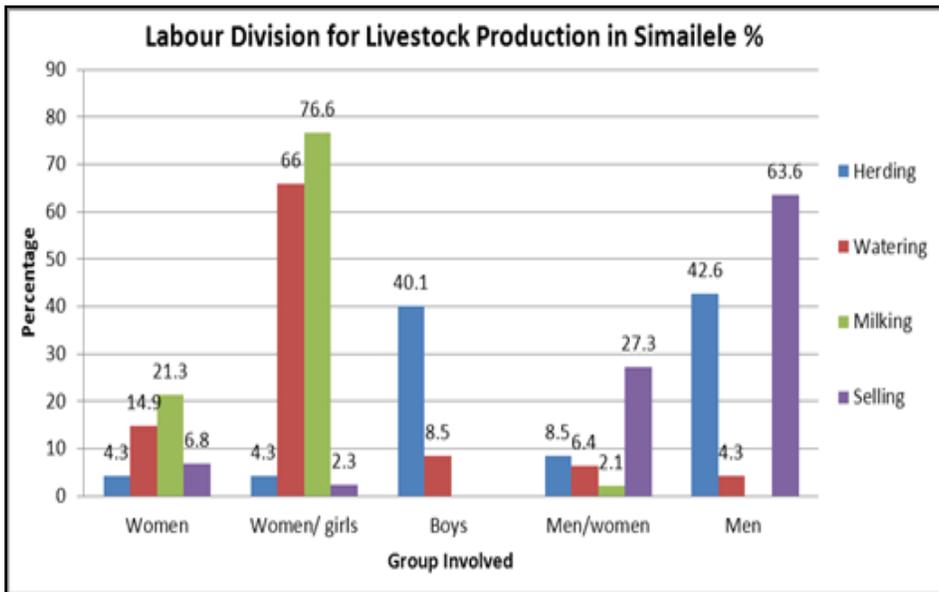
**Small-scale Business:** Both male and female headed houses relied on small scale business as an alternative source of livelihood (11.9%). The household survey showed this activity was the most preferred by 35.7% of the respondents. It was estimated 24.1% of respondents from male headed households relied on small scale business compared to 28.6% from female headed households. For women, this included brewing of alcoholic drinks *Kaada* (from baking powder fermented with sugar), *chang’aa* and *busaa*. The alcohol was consumed by men, women and children in the afternoons. Several drinking points were cited a long the canal and within the village. There were also a few groceries run by men.

The average monthly income in Simailele Scheme was Ksh 4,283. It was derived from various sources including sale of livestock (28%), income from small business (25%), sale of crop produce (18%), sale of charcoal (14%), income from casual labour (11%), and sale of milk (4). The average monthly expenditure levels were found to be Ksh. 4,068. The monthly expenditure was mainly used on school fees and scholarly, agricultural inputs/investments, family household items such as sugar, salt, rent, food among others and contributions to social functions.

A majority of households (55.8%) reported change from the main source of livelihoods while another 44.2% reported no changes from the main source of livelihood. The main reasons for change of the livelihood option were;

- Persistent drought spells
- Got employed in formal employment
- Inter-tribal conflicts
- Intervention by development partners
- Old age and illness
- Death of HH breadwinner

The main productive activities were livestock keeping and crop production. The contribution of women in these productive activities was significant as shown in **Figure 8 & 9**. In livestock production, boys and men mainly handled herding, animal health, slaughtering of cattle, camels and donkeys and sale of livestock. Women were responsible for livestock watering, construction of livestock pens, milking of animals, slaughtering shoats, sale of milk and land preparation. At the same time, women were not completely excluded from the activities meant for men the way men were excluded from the domestic care activities that were carried out by women and girls.

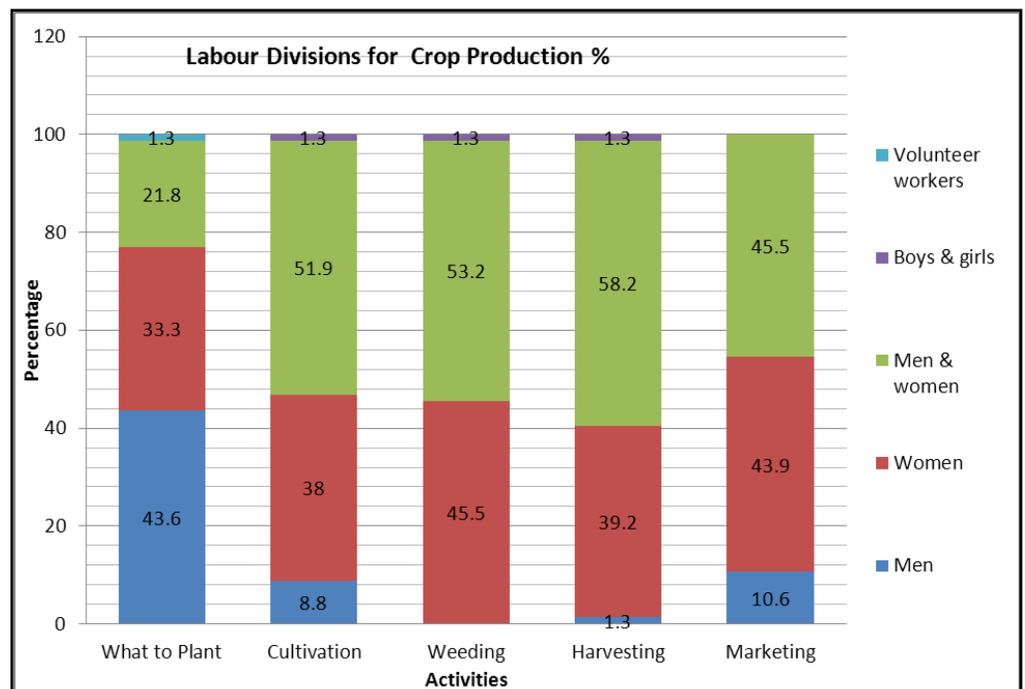


**Figure 8 :** Division of Labour- Livestock Production

**Figure 8** summarises the distribution labour for livestock based activities were: herding (men only 42.6%, boys 40.1%, men and women 8.5%, women 4.3%, women and girls (4.3%); watering (women and girls 66%, women 14.9%, boys 8.5%, men and women 6.4%

and men 4.3%); milking (women 21.3%, women and girls 76.6%, men and women 2.1%); and selling (men only 63.6.1%, men and women 27.3%, women only 6.8% and women and girls 2.3%).

Simailele was typically an agro-pastoralist community that had for a long time practised small-scale irrigation along the River Turkwell for food crops such as maize, sorghum, millet and cowpeas. Crop production was the main source of livelihood as indicated by 90.1% of respondents. **Figure 9** highlights labour division for crop production.



**Figure 9:** Division of Labour - Crop Production

Land cultivation was done by both men and women in 51.9% of households, women only in 38% cases, men 8.8% and boys and girls 1.3% making it a shared activity but with a greater input by women. Planting was done by men only in 43.6% households, women 33.3%, both women and men in 21.8% cases and volunteer workers 1.3%. Planting was a shared activity but dominated by men. Weeding was done by both women and men in 53.2% of households, by women

alone in 45.5% households and by boys and girls 1.3% making it a women activity. Harvesting was done by both men and women in 58.2% households, by women only in 39.2%, men 1.3% and boys and girls 1.3% making women the major contributors to this activity. In 45.5% of households, crop marketing was done by men and women, women 43.9% and men 10.6% making women the principal actors in this activity.

The reproductive activities (cooking, fetching water, building family shelter, taking care of children etc.) were largely the responsibility of women, who woke up much earlier than men, usually 4.00 a.m. to start their chores and were the last to go to bed. Their day was packed with sequential and overlapping activities some of which were combined in the same space of time e.g. going to the garden and fetching water.

The main convention for community management activities was the “tree of men” where male elders met daily to collect and exchange important information on issues affecting the community e.g. climate, security and migration of livestock. During the sessions, the *Emuron* (prophet) revealed his predictions regarding important matters/events (e.g. advent of drought or imminent onset of rains and potential or impeding invasion).

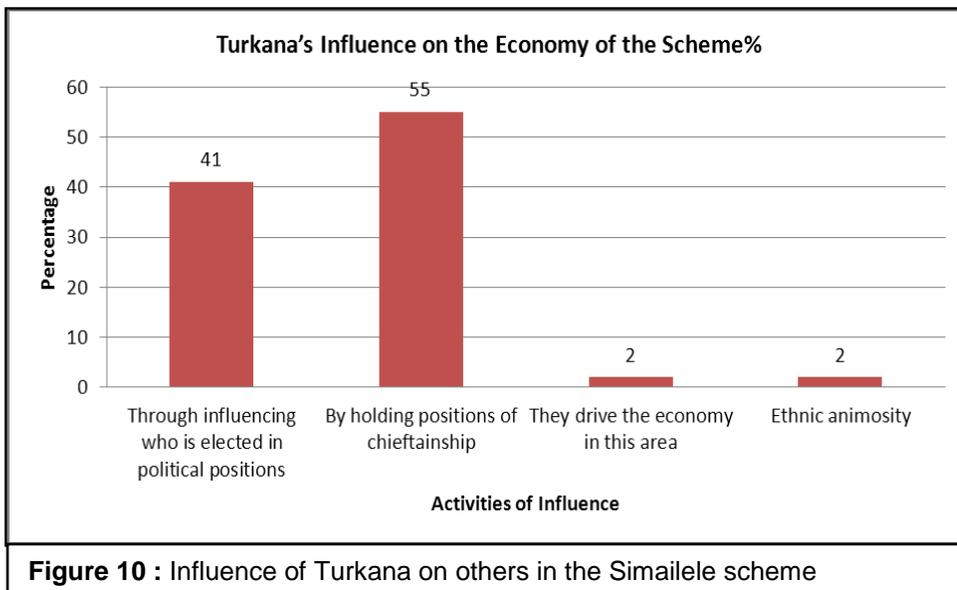
### 2.3 The Political Economy of the Scheme

Among the traditional Turkana community, socio-political influence and power belonged to those who had age, wealth, wisdom (emuron), and oratorical skill. Social organisation was based on territorial rights (the rights of pasture and water), kinship, relationships between individuals, and rights in livestock and labour.

The socio-political organisation of the Turkana community and customary institutions of conflict management could be summed up as the extended family, neighbourhood (clan) and tribe. The extended family included relatives living in a group of huts around a recognised authority, the head of the homestead. A homestead may comprise the head with his wife or wives and children, his ageing parents and a few in-laws who were dependants. The homestead when joined with other closely-knit households formed a kraal or *adakar*. The Kraal was always under the leadership of one of the elders.

Being the dominant community in Simailele scheme, the Turkana had the greatest influence over the other communities. The **Figure 9** indicates major social, political and economic controls exercised by Turkanas in the running of the scheme.

The scheme had a water users’ association committee of 10 men and five women. The executive committee was made up of 40% women: chairman - male, vice-chairman - male, secretary - male, vice secretary - female and treasurer – male.



**Figure 10** : Influence of Turkana on others in the Simailele scheme

Women were preferred to men for the position of treasurer because they were perceived to be less likely to steal money than men. They indicated that it would be too shameful for a woman to be caught stealing. On the other hand, the position of chairman was said to be suitable for a man because it required one who was forceful and who could be listened to. A female chairman was less likely to be taken seriously

by men in the committee because of the Turkana culture which places women lower than men in the pecking order.

Apart from the committee, the scheme had a foreman (a man) and a deputy foreman (a man) whose responsibility was to monitor what happens in the scheme (walked in the field) and report to the committee promptly. Some of the problems to report included destruction of crops by wildlife and blockage of the canal.

## 2.4 Sensitive Land/ Water issues and Conflict Resolution Mechanisms

### 2.4.1 Land Related Conflicts

Warfare was an essential part of social life in Turkana. This condition was as valid in the past as it was at the time of study given that the interaction between the Turkana and the surrounding communities continued to be hostile and violent.

Turkana is one of the driest counties in Kenya. The county is characterised by scarce natural resources. Competition over the use of limited pasture, grazing land and water resources between Turkana and her neighbours was the major cause of inter-ethnic conflicts perpetrated as cattle raids. Most natural resources were found on the borderline of the Turkana land thus posing inevitable clashes with these neighbours.

The study showed that the main causes of land conflicts were land boundaries (including newly found minerals) (38%), land ownership (28%) and ownership of grazing areas during the dry season (27%). Other causes included availability of water sources (2.8%), administrative units (4.5%) and other natural resources (1%). **Figure 11** highlights the major causes of land disputes. The Turkana community was culturally attached to large herds of cattle. The community believed that all cattle belong to them and that other communities were not entitled to rearing the animals. As such, it was their cultural obligation to acquire all livestock, including through raids. In addition to this belief, the Turkana raided other communities to restock especially after severe droughts and/or livestock diseases. The respondents confirmed the culture of inter-ethnic cattle raids to be rampant. Even at the time of report writing, there were reports of cattle raids between the Turkana and Pokot communities. These raids happen so often.

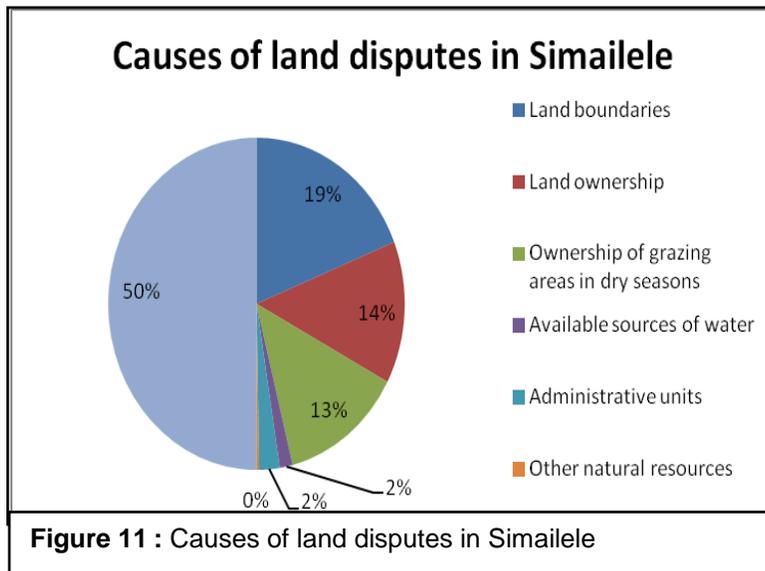


Figure 11 : Causes of land disputes in Simailele

### 2.4.2 Water related disputes

Water supply in Simailele was found to be unreliable since rivers Turkwell and Kerio depended on rainfall from the highlands. River Kerio would sometimes dry up for a whole year and in the recent past it had been dry for three months. Wells dried up during drought due to the lowering of water table. Most water pans dried up before the next rains since they were small in size and did not hold significant amounts of water. The rivers also changed course hence scarcity of water in areas that received it before. All these resulted in conflicts among the ethnic groups over water access and control.

### 2.4.3 Conflict Management Mechanisms and coping strategies

Conflicts between Turkana community and the neighbouring communities were to a large extent solved and managed through dialogue, negotiations and arbitration. Meetings were normally held with the aim of reaching amicable solutions. Both parties to the conflict were given enough time to plead their cases. Elders with good oratory and negotiation skills represented the community. In such meetings, decisions were arrived at through consensus.

Land issues were mainly resolved through elders' committee resolution (33%), sharing a meal in a public *baraza* (25.7%), involvement of police/administration (18.7%), discipline through expulsion from community (11.1%) and migration by a community (10.5%).

## 2.5 Morbidity and Culinary Habits of the People

This section discusses the nutrition, sanitation and hygiene, morbidity and its causes and lastly the health facilities in the scheme.

### 2.5.1 Nutrition and Eating Habits

The majority (62.5%) of the residents were considered on average to be food secure in Simailele. At the household level, 37.5% respondents reported poor food security, 46.6% reported to have fair food security, while 15.9% said they were food secure. The household reported drought (33.2%), livestock diseases (7%), conflicts and insecurity (22.3%), floods (10%) and human disease (27.5%) as the main causes of food insecurity. Coping mechanisms to food insecurity was that most residents reported to ask relatives for money (5.5%), borrow food from relatives (14%), rely on relief food distribution (26.4%), sell livestock (4.3%), sell personal assets (0.9%), consume food on credit from local kiosks (17.9%), reduce number of meals (16.6%), reduce size of meal (13.2%) and reduce food varieties/ eat cheap food (1.3%).

Drought was also a major source of vulnerability that compromised availability of food. The community relied on relief food distribution by the government and NGOs during shortages. At the time of study beneficiaries were receiving relief food and each family received 6kg of maize, 2kg of beans and 40ml of oil to last them three days. Targeting was by vulnerability as determined by the location chief and ward administrator. Women used the rations to make the alcoholic beverage "busaa" as a source of income. Households also sold some animals, particularly goats, to buy grains. Otherwise, families had meals only once a day (supper) and the husband was served food first followed by children with the mother coming last. Clan members helped each other when problems arose e.g. by donating livestock to meet a need. Eating wild fruits as shown by **Photo 3** was common. From the FGDs, it was learnt that during the severe droughts, only one meal per day was taken. Boys were given more food than girls as was reported by 98.8% of those interviewed. They were fed more because they were the security force and had to be strong to defend the community. They were also herders and had to be strong to run after the animals. They were the head of the family.



**Photo 3:** Wild fruit, eaten during dry spells as a coping diet

Typical food in Simailele scheme included sorghum *ugali* eaten with vegetables and occasionally meat. Breakfast consisted of porridge or tea; lunch was sorghum *ugali* with either milk or vegetables but not

both; and dinner consisted of sorghum with green grams or meat. Normally, households could stay for more than two weeks before eating meat. In the scheme, however, fresh sorghum grains were eaten while the sorghum stem was chewed like sugarcane.

The findings indicate that children in Simailele were weaned at an average age of 6 months. At the household level, common foods given to the male infants were porridge (29.7%), milk (31.5%) and *ugali* (26.1%). Fruits, beans and meat were provided in small proportions. The female infants were fed on fruits (35.3%), *githeri* (33.6%) and bananas (14.7%) and also meat, *ugali* and eggs but in small proportions. Due to drought about 30% of the children were not taking enough food which could also be low in important nutrients that would support health growth. Malnutrition was common and diseases related to poor nutrition including Kwashiorkor and Marasmus (14%) were observed in villages shown by **Figure 13**. This exposed children and increased the risk of children morbidity and mortality. About one-quarter (26 percent) of Kenyan children are stunted, while 8 percent are severely wasted. Turkana reported to have highest proportions (23% of wasted and 24 % stunted) children (2014 KDHS)<sup>5</sup>. Thus, 46.2% of the households were reported to give children supplementary feeding. The reasons given for supplementary feeding included improving their general growth (20%), to prevent disease (60%) and to fight hunger (20%).

The expectant and lactating mothers were fed on *ugali* (22.7%), meat (14.2%), porridge (21.3%) and beans (9.2%). Other foods given in small proportions were *githeri*, fruits and vegetables.

**Eating Habits:** In traditional setting, meat and milk were the staple food for the community. However, in times of food shortage, *ugali* was eaten. There were taboos and rules that governed the eating of meat and animal organs. Parts of a slaughtered animal were apportioned as follows: neck, stomach, intestines, hooves, hind-legs and sheep tail (women although in some clans they did not eat intestines when pregnant as it was believed that they would experience complicated delivery or become barren); back, one fore-leg, shoulder, hump, liver and tongue (men); head, right fore-leg and head (male elders); testicles (male youth); chest, heart and intestines (young boys); one fore-leg, kidneys and stomach (girls but they did not eat the large intestines otherwise it was believed that they would fail to develop properly). In some clans (e.g. Nimeturana) women who had gone through a traditional wedding could not drink millet porridge until they had given birth.

### 2.5.2 Sanitation and Hygiene

The household survey findings in Simailele showed that only 14.4% of the residents reported to have toilet facilities in their homestead while 85.6% of the households reported to have no toilet facilities at their homesteads. Asked why they did not have latrines, the participants in FGDs laughed it off and did not consider it a necessity for the households to have toilet facilities. Also, the men responded that, the fear of getting into the latrines was that, the 'enemy' may wait for



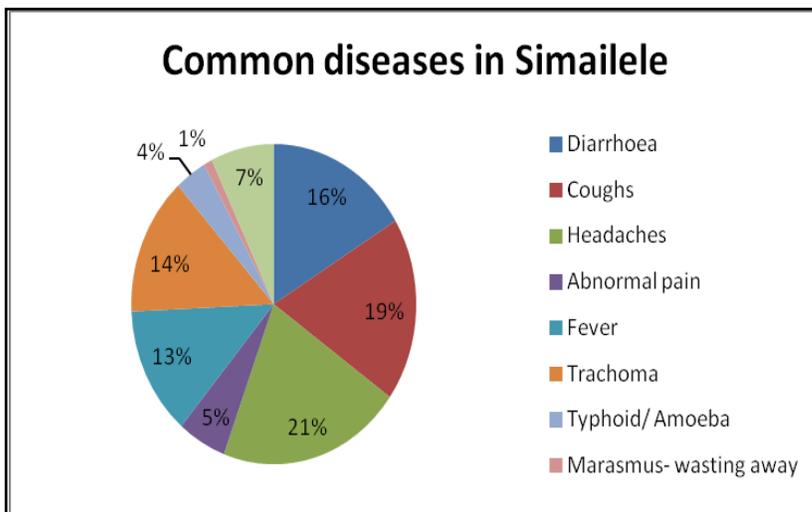
<sup>5</sup> Anthropometry provides one of the most important indicators of children's nutritional status. The height and weight data were used to compute three summary indices of nutritional status: height-for-age, weight-for-height, and weight-for-age. These three indices were expressed as standardised scores (z-scores) or standard deviation units from the median for the child growth standards recommended by the World Health Organisation. Children who fall more than two standard deviations below the reference median are regarded as undernourished, while those who fall more than three standard deviations below the reference median are considered severely undernourished. Children whose height-for-age is below minus two standard deviations (-2 SD) from the median of the reference population are considered stunted or short for their age. Stunting is the result of failure to receive adequate nutrition over an extended period and may also be affected by recurrent or chronic illness (Source : 2014 KDHS Report)

them outside and ambush them unawares. Those without toilets were queried where they disposed of human waste and the following responses highlighted in **Figure 12** were recorded. Ninety two percent of the residents used bushes to dispose human waste. Another 6% used open fields, near water sources and near the house each contributed to 1% of the households.

### 2.5.3 Morbidity and Causes of Morbidity

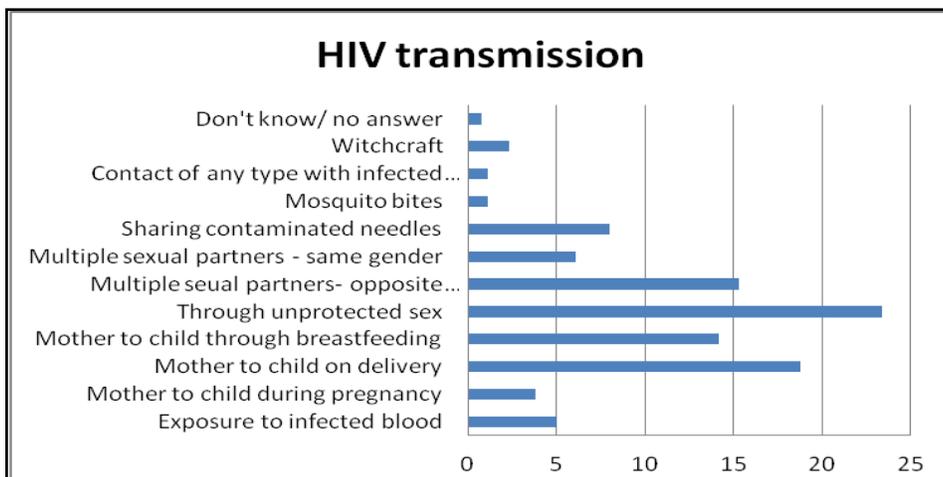
It was established in the household survey that the most common disease in Simailele was headache. Other major diseases included coughs, typhoid, diarrhoea and fever. The common diseases are highlighted in **Figure 13** below.

It was noted that disposal of human waste in open fields and bushes was the cause of most of the diarrheal diseases. It was also noted that malaria was prevalent with 70% of the respondents reporting that they had a child infected with malaria in the last two weeks. It was in only 28% of the households that all members of the family used mosquito nets despite the fact that 62.4% of the households owned mosquito nets. This was because the nets were mostly a preserve of the children under 5 years of age.



**Figure 13:** Common diseases in Simailele

Ninety-one per cent of households reported to have knowledge of HIV/AIDS. The respondents were quite informed on HIV/AIDS transmission. However, there were untruths on HIV/AIDS transmission reported; such as witchcraft, mosquito bites and contact of any type with the infected person. **Figure 14** highlights ways in which people in Simailele believe HIV/AIDS was transmitted. Majority of respondents confirmed that it was transmitted through mother to child through breastfeeding, engaging in unprotected sex, mother to child on delivery and sharing contaminated needles.



**Figure 14:** How HIV Transmitted

### 2.5.4 Health Facilities

In Simailele health facilities were located very far away from the residents with 55.6 % of the households covered in the survey taking more than 120 minutes (2 hours) to access the nearest health facility. The services offered at the health facilities were; issuing of drugs (35.4%), prescriptions (34.3%), laboratory services (24.2%) and immunization of children (6.2%). It was, however, confirmed through the FGDs that immunization was normally done through mobile clinics and this explained the low turnout at the health facilities.

Most of the patients in the facilities were attended to by a trained nurse as confirmed by 74.4% of respondents. Other personnel who attended to patients include clinical officers (6.7%), community health workers (10%), other health workers (7.8 %) and medical doctors 1.1%. When prescribed drugs were not available, patients buy from the local pharmacies.

## **2.6 Ownership of Resources**

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### *2.6.1 Land Ownership*

Turkana County's land tenure system was mainly based on communal land ownership. Land ownership at Simailele Irrigation Scheme was largely communal through clans at 36% followed by communal land ownership through group ranches at 22%. Clan elders controlled land use, but individuals had traditional ownership rights on small plots along the river flood plains where they practised rain-fed and small scale irrigated crop production. Total land acreage under irrigation was 100 acres, representing 400 farm families.

### *2.6.2 Livestock Ownership*

Traditionally, goats/sheep, cattle, donkeys and camels were owned by men while women keep and own chicken. Wives may take custody of sheep and goats but they had no control and must consult their husbands whenever they wish to do anything with the animals. But women could slaughter the chicken for home consumption or sell in the market without the husband's express permission. Men with large livestock herds were perceived to be rich while those without were perceived to be poor. In terms of wealth ranking, a rich man had 60 goats/sheep, 10 camels and five donkeys. A poor one had five goats/sheep, one camel and one to three donkeys.

Men normally consulted their wives when they wanted to sell animals and also on how to use income from the sales. Main uses of income were: school fees; starting/expanding business; hiring farm labour; animal health; family health; and buying more livestock.

When a male household head died, the livestock was managed by his eldest son, his mother and a brother. In some cases, the brother took all the livestock. In polygamous families, the first wife (widow) got more animals than her co-wives/widows. Women whose marriage was not formalised traditionally (piercing a bull with a spear) did not inherit anything and were sent away. At the time, disputes on all matters of property inheritance were taken to the chief.

### *2.6.3 Issues rising from Ownership of Resources*

The main constraint women faced with regard to livestock resources was the culture which barred them from owning and controlling animals. That they could not make decisions over livestock meant they were unable to liquidate, dispose of or individually utilise them as assets beyond subsistence. The window of opportunity lay, however, in the fact that husbands normally consulted wives before disposal and on use of incomes generated, which meant that the wives may influence decisions. Particularly disadvantaged were widows, especially those whose marriages were not formalised traditionally who were completely disinherited of the deceased husband's property. Land in Simailele was clan owned and thus access and control by individuals was limited and more so towards women as clans in themselves were male dominated.

## **2.7 Capacity Building**

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### *2.7.1 Training needs of Staff in Relevant Anthropological Issues*

There was need to develop capacity in the area of

- Gender mainstreaming

- Social Behaviour Communication
- Group dynamics-formation and formalisation by laws
- Crop irrigation agronomy
- Conflict management
- Pasture establishment and conservancy
- Soil and water conservation
- Capacity building of project management committee
- Range Management Principles
- Pasture and livestock marketing
- CMDDR-community management disaster and drought Response

### *2.7.2 Training Needs of and Farmers in Anthropological Issues*

There was need to develop capacity in the area of

- Organic and inorganic farming,
- Conflict management,
- Modern ways of honey farming,
- Gender mainstreaming,
- Social Behaviour Communication,
- Group dynamics-formation and formalisation on by laws,
- Crop irrigation agronomy,
- Pasture establishment and conservancy,
- Soil and water conservation,
- Capacity building of project management committee,
- Range Management Principles,
- Pasture and livestock marketing,
- CMDDR-community management disaster and drought response

### 3. CONCLUSIONS AND RECOMMENDATIONS

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#### 3.1 Conclusions

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##### 3.1.1 *Socio-cultural and social economic dynamics*

The Turkana had a rich cultural heritage that had always helped to glue the 20 clans together. However there were also traditions, held to such as cattle raids that had transformed into a menace. It was no longer restocking or acquiring animals to pay bride price, rather it had been commercialised, it was violent and retaliatory oblivious of the norms and rules that traditionally governed it. For the young men to show their military prowess and warriorhood successful raids counted and the women were known to consider men who had killed the 'enemy' as heroes. Society glorified violence and had specific names for them.

##### 3.1.2 *Sources of livelihoods*

In Simailele crop production was the primary source of livelihood. As discussed, land was communally owned and the adjudication process was underway. There was need to fast track the process and issuance of titles to follow, as residents had realised the benefits that accrued from individual efforts, as exemplified by the successful maize and vegetable farming in Simailele. With title, farmers could access finances that they could plough into their farms and improve their economic standing. Crop farming was more sustainable and less prone to conflict. This may be the solution in the long term but in the interim peaceful co-existence was quintessential.

##### 3.1.3 *Economic organisation*

Land was a major resource. Land ownership at Simailele Irrigation Scheme was largely communal through clans at 36% followed by communal land ownership through group ranches at 22%. Clan elders controlled land use, but individuals had traditional ownership rights on small plots along the river flood plains where they practised rain-fed and small scale irrigated crop production.

##### 3.1.4 *Political organisation*

Among the Turkana, authority rested with the elders. The MCA, MPs, governor and senator commanded political power too. In the community, male elders were highly regarded and made decisions relating to community management activities. These activities included conflict resolution (land boundaries, crop destroyed by livestock, theft and domestic issues); presiding over traditional ceremonies and rituals; monitoring of community security and participation in communal activities such as weddings and funerals.

##### 3.1.5 *Sensitive issues and Conflict*

Animal raiding and perpetual conflicts over resources within and across with the neighbours was a major source of tension and instability in Simailele given its proximity to the border with the Pokot. Forever communities lived in fear of attacks and retaliatory attacks particularly at the onset of rains which brought about pasture in abundance.

Inter clan disputes and others arising in social relations could be handled amicably. Disputes over water resources were commonly reported. Some residents diverted water from their neighbours' farms leading to quarrels and conflicts. Farmers harvest honey and did not know what to do with the surplus. EWS does not exist on how to deal with conflicts and impending threats. Farmers did not exhibit capacity to deal with disasters that may arise in their day to day situations.

##### 3.1.6 *Morbidity and Culinary Habits of the People*

The household survey findings showed low latrine coverage with 92% of the households reporting to using the bush. Malaria was a major challenge in the area noting that 70% of the respondents reported that they had a child infected with malaria in the past two weeks. Coupled with this was the low number of people sleeping under a mosquito net which stood at a paltry 28%.

### *3.1.7 Ownership of resources*

In regard to ownership and control of resources, we realised that this was a male dominated society. Women had no access to control and ownership of vital resources such as land and livestock. The main constraint women face with regard to livestock resources was the culture which bars them from owning and controlling animals. That they could not make decisions over them means they could not liquidate, dispose of or individually utilise them as production assets.

### *3.1.8 Capacity building County Staff and Community*

The training was conducted for field county staff and assessment training needs identified. On the same breadth an assessment was undertaken on the training needs of beneficiaries of the project. The capacity building was identified.

## **3.2 Recommendations**

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### *3.2.1 Socio-cultural and social economic dynamics*

Livestock rustling should be done away with, communities should be disarmed and co-existence with pastoral neighbouring communities should be encouraged. Inter-marriage between the two communities should be encouraged, be directional in order to build societies that are cohesive and living in mutual harmony and not animosity as was at the time of study.

### *3.2.2 Sources of livelihoods*

The uptake of farming in Simailele was inhibited by limited farm inputs and machinery. Also reported was that manure was burnt as the people believe that using the manure on the farm would jeopardize their animals. They would promise to use the manure but when DAO officers came, they found the manure having been burnt. Thus more extension services are required to inculcate in the modern ways of farming. Inputs and farming machinery should be provided to the farmers as an incentive. Surplus honey production and inadequate marketing avenues calls for value addition in order to boost its production and strengthen the peoples' resilience. Also, charcoal burning which was a preferred source of livelihood poses serious environmental risks which could be averted. Besides having large herd of livestock was seen as powerful and such people were given respect within the community. Youth and adult men were not eager to farm and they look after livestock, which were considered more prestigious and earns one status in the community.

### *3.3.3 Economic organisation*

Given that a majority of the people had shown willingness to take up crop farming this was an avenue that could be harnessed in a bid to strengthen the community's resilience. This could be done by countering the challenges earlier mentioned as follows; conflicts arising from access of water during the dry spell; lack of clean water for domestic use (21.3%), power management of water sources (16%), low water allocation (14.2%); erosion; uneven land surface in some places; crop destruction by wildlife; shortage of farming implements; lack of familiarity with irrigated crop production and handling of crops; lack of fertilizers and other inputs; floods, and general lack of mechanization.

### *3.3.4 Political organisation*

From the findings were deduced that majority of the conflicts and disputes were resolved through the institution of the council of elders. Thus the institution of the elders could complement the county efforts in peacebuilding for sustainable development. Political goodwill is a requisite for strengthening resilience for without peace farmers could not cultivate and wait for their crops to mature.

### *3.3.5 Sensitive Issues and Conflict*

Inter-ethnic conflicts between the Pokot and the Turkana remain rife and a major threat which is a priority for resilience building and for building sustainable social and political relations. Also, there is need for political goodwill and the need to engage the local politicians in the establishment of the scheme, right from the beginning to avoid potential squabbles. Peace sponsored forums were essential. Exploration of alternative sources of livelihoods, away from pastoralism which was the main trigger of conflicts has to be sought in the long run. In the interim peaceful coexistence and conflict management has to be employed.

### *3.3.6 Morbidity and Culinary Habits of the People*

There is an urgent need to educate Simailele communities on the importance of sanitation and hygiene which involves construction and proper use of pit latrines. Community members should also be sensitized on the importance of all family members to sleep under treated mosquitoes nets and not to assume that the nets were only intended for children below five years and expectant mothers. Also with increased irrigation there is abound to be more mosquitoes and thus the need for all to be protected against mosquito bites.

### *3.3.7 Ownership of Resources*

Land was a major resource and a major source of livelihood for the community. The issue of land ownership and acquisition remain key in any intervention aimed at building resilience. Women know how much control they could exercise over the livestock and thus there were rare cases of conflicts on this at the household level. We recommend that chicken though ranked as the least form of wealth has potential that could be tapped by women for their own empowerment as exemplified presence at Nalemsekon centre of a chicken project by Neema Women's Group. Women could be empowered to be shareholders in community wealth as were men because they had shown potential of investing and wealth generation.

### *3.3.8 Capacity building County Staff and Community*

#### **a) Beneficiaries Capacity Building**

There was need for farmers to be trained in the following

- Sensitisation on repugnant culture,
- How to co-exist ,
- Social relations and leadership,
- Interaction and social and cultural change and dynamics,
- Social transformation and about ethnocentrism so that they could live in peace with others.

#### **b) Count Staff Capacity building**

The following are recommended one week training modules:

- Gender mainstreaming
- Social Behaviour Communication
- Group dynamics-formation and formalisation by laws
- Crop irrigation agronomy
- Conflict management
- Pasture establishment and conservancy
- Soil and water conservation

- Capacity building of project management committee
- Range Management Principles
- Pasture and livestock marketing
- CMDDR-community management disaster and drought Response

#### 4.0 REFERENCES

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1. Anderson, D.M. & Broch-Due, V. (Eds). 1999. *The poor are not us: poverty and pastoralism in Eastern Africa*. Oxford, UK, James Currey; Nairobi, EAEP; Athens, Ohio, USA, Ohio University Press.
2. Baxter, Paul T.W. and Uri Almagor (eds.): *Age, Generation and Time. Some Features of East African Age Organizations*.
3. Baxter, P.T.W. & Hogg, R. (Eds) (1990) *Property, poverty and people: changing rights in property and the problems of pastoral development*. Manchester, UK, Department of Social Anthropology and ICD, University of Manchester.
4. Dahl, G. & Hjort, A. (1976) *Having herds: pastoral herd growth and household economy*. Stockholm Studies in Social Anthropology No. 2. Stockholm, University of Stockholm.
5. Dietz, T. (1987) *Pastoralists in dire strait; Survival strategies and external interventions in a semi-arid region at the Kenya/Uganda border. Western Pokot, 1900 – 1986*. University of Amsterdam
6. Fratkin Elliot (2014) 'The Samburu Laibon's Sorcery and the death of Theodore Powys in Colonial Kenya', *Journal of Eastern Africa Studies*.
7. Galaty JG and P. Bonte (1999). *Herders, Warriors and Traders*, Boulder Colorado: Westview Press.
8. GoK, (2002) *Marsabit District Development Plan 2002-2008* (Nairobi: Government Printer).
9. GoK, (2002) *Turkana District Development Plan 2002-2008* (Nairobi: Government Printer).
10. GoK, (2002) *Baringo District Development Plan 2002-2008* (Nairobi: Government Printer).
11. Kenya Food Security Steering Group (KFSSG) and Samburu County Steering Group (2015) *Samburu County 2014 Short Rains Food Security Assessment Report*.
12. Krätli, S. & Jeremy, S. (2001). *Understanding and Managing Pastoral Conflict in Kenya: How contemporary understandings and knowledge of pastoral conflict can guide practical work*. Environment Team, IDS Sussex, UK.
13. Markakis J. (ed.) *Conflict and the Decline in Pastoralism in the Horn of Africa*, Macmillan - London.
14. Mohamed G. Shibia (2010), "Determinants of Attitudes and Perceptions on Resource Use and Management of Marsabit National Reserve, Kenya" *Journal of Human Ecology*. 30, 1, 55-62.
15. Mkutu, K. (2001). *Pastoralism and Conflict in the Horn of Africa* APFO/Safer world/Bradford University.
16. Mkutu, K. (2008). *Guns and Governance in the Rift Valley: Pastoralist Conflict and Small Arms*. Oxford: James Currey.
17. Tablino, P (1999). *The Gabra: Camel Nomads of Northern Kenya*. Limuru: Diocese of Marsabit. Italy: E. M. I. Bologna.
18. Robbin Pat (2010) *Red Spotted Ox: A Pokot Lif*. Denmark. IWGIA.
19. Simpson George and Waweru Peter (2012) 'Becoming Samburu: The Ethno genesis of a Pastoral People in 19<sup>th</sup> Century Northern Kenya', *The Journal of Middle East and Africa*.
20. Spear T and R. Waller, (1998) *Being Maasai: Ethnicity and Identity in East Africa*. London: James Currey.
21. Spencer Paul (1973) *Nomads in Alliance: Symbolism and Growth among the Rendille and Samburu of Kenya*. London: Oxford.
22. Whittaker, H. (2012). *The socioeconomic dynamics of the Shifta conflict in Kenya*. Nairobi: Cambridge University Press.
23. Witsenburg, K., & Roba, A. W. (2009). *Of Rain and Raids: Violent Livestock Raiding in Northern Kenya*. *Civil Wars* 11(4): 514 -538.
24. Wood, J. C (1999). *When Men are Women, Manhood among Gabra Nomads of East Africa*, Wisconsin Uni. Press. Wisconsin. USA.
25. Kenya Demographic and Health Survey, 2014

**Annex 1: List of People interviewed**

## 1. FDGs at Simailele Irrigation Scheme

	<b>Men</b>		<b>Women</b>
1	Aruto Ebeyo	1	ManjarutaSamal
2	Nakanokan Esekon	2	Teresiahllare
3	Yohana Aleper	3	EtanEdabal
4	Asekon Lomuria	4	Margaret Ekamais
5	Nawoto Mukura	5	EkitelaEsron
6	Samal Etengan	6	NaluuNgabalia
7	Ebungan Koloe	7	NasuroiNabus
8	Josphar Lokapel	8	EmutonoBethep
9	Longolia Arunya	9	EpetetEkile
10	Sitipin Lokatoe	10	Anna Ngarechan
11	Emili Ngolem	11	ApuaNameremia
12	Samuel Erengae	12	AuriongoEkile
13	Peter Petoo	13	EsekonAwuet
14	Lodung Namasi	14	Akal Nolengemoe
15	Samual Ekale	15	HellenEkadoli
16	Echua Namasi	16	Margaret Atir
17	Esuron Lemuya	17	PriscilaAmaria
18	Nayangan Lokidor	18	Regina Emani
19	Lotot Lotongole	19	Esther Ekuam
20	Lokolak Napokoe	20	Christine Edukan
21	Nawoe Apalir	21	MartnaEkidori
22	Ikalale Ewiren	22	Rebecca Atoot
23	Lotir Lowok	23	Elizabeth Angashuro
24	David Edapal	24	AmoteEken
25	Pitir Enyas	25	NgebeyokPeto
26	Ngikwagoe Lochom	26	LotokoiLongolin
27	Lomeyana Loriu	27	EchotoKatir
28	Johnson Esuron	28	Agnes Nakoe
29	Gabriel Lomuria	29	AbenyoAroot
30	Ekeno Ekulan	30	EmanatEkeno
31	Peter Lotore	31	Margaret Etabo
32	Inok Nangolol	32	Christine Ngoolem
33	Esekon Lokalei	33	Regina Napeyok
		34	Jacinta Akiro
		35	LemuyangEkalan
		36	EyanaeChipale
		37	KaileLokwawi
		38	AdukanEkooli
		39	EbuyaLookom
		40	EyanaeEnea
		41	EkisMoru
		42	AtaboLochuch
		43	Mary Asinyan
		44	Stellar Naperit

## 2. FGD with Katilu Sale Yard Committee

	<b>Name</b>	<b>Sex</b>
1	John Ekai	Male
2	Christopher Ekai Nawalan	Male
3	Moses Eduki	Male
4	Benson Lomodu	Male
5	Hamed Ismael	Male
6	Joseph Aite Eryo	Male
7	Agnes Akiya Marko	Female
8	Aumolem Erupe	Female
9	Elizabeth Nasum	Female
10	Esther Lokidor	Female

## 3. Men's FGD at Kalemng`orok Sale Yard

1	<b>Name</b>
2	Samuel Lomuria
3	James Lopai
4	Ekai Esekon
5	Ekeno Elipan
6	Emoru Lowoi
7	Sammy Lochomin
8	Ekalale James
9	Lomukuny Ekalale
10	Ewolan Lokope
11	Ekitela Eporon
12	Nanok Akusi
13	James Turkan
14	Apus Long`ora
15	Loboki Ekai
16	James Nanuki
17	Ebei Ekomwa
18	Elim Kerio

## 4. Key Informant Interviews

SN	Name	Sex	Designation/Organisation
1	Anthony Kiprop	Male	DSDO, Department of Gender and Social Development,
2	Asena Sefalia	Male	Assistant Livestock Production Officer, Turkana Central
3	Ernest Mugodhi	Male	Chief Livestock Health Assistant, Turkana Central
4	Sarah Arukudi	Female	Cooperative Officer
5	Dr. Dallington Akabuae	Male	Veterinary Doctor
6	David Tanui	Male	Irrigation Engineer, Turkana Central
7	David Kosgey	Male	Water Officer, Turkana North
8	James Kipkan	Male	Programme Manager, Turkana Rehabilitation Programme
9	Akbwai Darlington,	Male	Veterinarian, Central Turkana
10	Benedict Owila	Male	Research Officer- NIB at Katilu Irrigation Scheme.
11	Alice Edome	Female	Administrative Assistant, Department of Agriculture
12	Paul Ekal Beiber	Male	Senior Subordinate Staff, Department of Agriculture
13	Menela Romolo	Male	Driver, Department of Agriculture

**Annex 2: List of Staff Trained**

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<b>No.</b>	<b>Name</b>	<b>Designation</b>	<b>Gender</b>
1	L.O. Obino	CDA	M
2	Taiy M. K. Wilson	SADLP	M
3	Vitalis Juma N	AAO	M
4	Patrick O. Manyoya	WAO	M
5	Vincent Morara	DAO	M
6	Wilfred Wafula	PLRO	M
7	Joshua Manwari	CDDMS - MENR	M
8	Elisha Talam	CAA	F
9	Wilson Silah	CAA	M
10	David Koskei	SCWO	M