

**THE IMPLICATIONS OF ALTERNATIVE LIVELIHOODS ON PASTORAL
CONFLICTS: EVIDENCE FROM POKOT AND MARAKWET ETHNIC
CONFLICTS IN NORTHERN KENYA**

Mr. WILLY CHEPKANGOR*
DR. NG'ETICH KIBET**
DR. HADIJA MURENGA***

*Post-Graduate Student, Dept. of Peace, Security and Social Studies, Egerton University, Kenya

**Senior Lecturer, Dept. of Peace, Security and Social Studies, Egerton University, Kenya

***Senior Lecturer, Dept. of Peace, Security and Social Studies, Egerton University, Kenya

ABSTRACT

This study focused on the implications of livelihood diversification on pastoral conflicts between Pokot and Marakwet Communities of Kenya. The Pokot and Marakwet communities are traditionally pastoralists living in Kenya's North Rift region. Nomadic pastoralism has until recently been their most feasible and reliable source of livelihood. Sharing of common and limited water, pasture and other pastoral resources has fuelled competition and conflicts between the communities thus making pastoralism as a source of livelihood difficult to pursue and its future becoming more uncertain. This has in recent years prompted a number of members from the two communities to consider diversifying their sources of livelihood into crop and dairy farming, formal employment as well as business. Whether such decision has resulted in a reduction or escalation of ethnic conflicts between the communities was the focus of this study. The current study had a sample size of 220 selected through purposive and stratified sampling. Data was collected by use of interview schedule and analyzed descriptively and inferentially. The results of the study were reported in percentages and presented in tables and figures. The pursuit of alternative sources of livelihood by some members of the two (away from pastoralism) had resulted in a reduction in incidences of pastoral conflicts between the two communities. But the fact that new sources of livelihood such as crop farming and charcoal trade is leading to depletion of resources such as water, farmlands and forests, which coincidentally are also targeted by pastoralists is paving for new frontiers of conflicts. Accordingly this study has recommended for the development of an integrated resource use and management framework to forestall the emergence of new conflicts.

KEYWORDS: Livelihood, Diversification, Pastoralism, Conflicts, Pokot, Marakwet

INTRODUCTION

Nomadic pastoralism has until recently been the most feasible and reliable source of livelihood for the Pokot and Marakwet communities due to the arid conditions of their districts. While traditional pastoralism has in recent years been faced with uncertain environmental conditions and ecological pressure, cattle raiding remains the greatest threat to its survival (Rigby, 1992; Hendrickson et al, 1998; Birch and Halima. 2001). Cattle raiding among pastoral communities date back to pre-colonial period. Traditionally, raiding was considered as a means of acquiring wealth, raising dowry, restocking and psychosocial atonement. The practice had due regard for human life and were largely under the guidance and direction of community elders. Traditional weapons such as spears, bows and arrows were the main weapons used in the raids. Although at times lives were lost during the raids on either side, such losses of lives were never celebrated even if they were all from the enemy community.

Although cattle raids have been part of pastoral communities including Pokot and Marakwet communities, the frequency and scale of the practice has been on the rise since 1970s. It is around this time that neighbouring countries such as Uganda, Sudan, Ethiopia and Somalia started experiencing political instability. The political instability in these countries led to the proliferation of small arms and light weapons into civilian hands due to dysfunctional state structures. While some of these weapons were used to foment rebellions against governments, some of the arms found their way through well established commercial arms dealers into pastoral communities and have thus been heavily linked to the escalation of cattle raids in these communities. However, the most worrying trend in modern cattle raiding has been the commercial angle it has assumed in recent years. While in previous decades the stolen livestock was redistributed or used to pay bride prices, rustling has more recently turned into a form of organized crime involving commercial traders in the livestock sector (Hendrickson et al., 1998). The proceeds from these raids are further used to organize more cattle raids leading to the establishment of a well connected pool of professionalized marketing of stolen animals.

Conflicts occasioned primarily by cattle raiding, changing ecological patterns and dwindling grazing lands have made pastoralism a difficult source of livelihood (Barth, 1973). Confronted with these, some pastoralists have abandoned pastoralism altogether and have ventured into other sources of livelihood, while others have diversified their sources of livelihood (Aboud and Suudiya, 1994; Niamir, 1990). Consequently, some members of the Pokot and Marakwet communities have in recent year embarked on crop farming, zero

grazing and dairy keeping among other sources of livelihood that are far much removed from traditional pastoralism. While livelihood diversification among pastoralist communities have been necessitated by many reasons, Bonfiglioli and Watson (1992) point out that it has been done mainly to reduce ethnic or clan conflicts arising from cattle raids. But the fact that there still exist sporadic cattle raiding and occasional clashes over pastoral resources between the two communities raises questions on the viability of livelihood diversification in delivering a durable peace between the two communities. This necessitated the need to examine the implications of livelihood diversification on the status of ethnic conflicts between Pokot and Marakwet communities.

Methodology

This study used survey design. The design is suitable in studies that seek to assertively describe certain attributes within a given population (Babbie, 1986). Survey design is also considered less expensive when the study site is wide as it is cheap. The study site was indeed wide thus making survey design appropriate. This study used a total of 220 households, which was selected as the sample size for the study, with 100 and 120 households selected from the Marakwet and Pokot communities respectively. Data was collected through the administration of interview schedule, which had both structured and unstructured questions. Data was processed and analyzed using descriptive and inferential statistics, with the results of the study being presented in tables and figures.

Issues

This study sought to (1) examine the relationship between individuals' socio-economic characteristics and sources of livelihoods, (2) assess household's livelihood adaptation strategies, and (3) analyze the relationship between alternative livelihoods and conflict situation between Pokot and Marakwet communities

Findings, Results and Discussions

Respondents' Profile

Respondents in this study were aged 18 years and above, with majority or 27.2% of them aged 40-50 years. Persons aged 29-39 and 51-61 years accounted for 23.8% and 20.8% of the respondents respectively. Other respondents were aged 18-28 and 62-72, which accounted for 17.8% and 10.4% of the respondents respectively. Males accounted for 55% of the

respondents, with females constituting 45%. Respondents with no formal education, primary, secondary, college and university levels of education accounted for 43%, 21%, 14%, 15% and 7% in that order. The study had 57% and 43% of the respondents drawn from Pokot and Marakwet communities respectively. With regard to religious affiliation, 43%, 28%, 22%, 5% and 2% of the respondents were Protestants, Roman Catholic, Traditional, Evangelical and Muslims faiths.

Individual's Socio-economic Characteristics and Sources of Livelihood

Sources of Livelihood

Members of Pokot and Marakwet communities sourced their livelihoods from formal employment, crop farming, dairy farming and business. Business was the most common source of livelihood, which was pursued by about 52% of the respondents. Dairy and crop farming were sources of livelihoods to 10.95% and 20.30% of the respondents respectively. About 16.8% of the respondents derived their livelihoods from formal employment as is shown in figure 1 below. Further analysis of figure 1 reveals that about 68% (business and formal employment) of members of Pokot and Marakwet communities derive livelihoods from sources that do not offer direct competition to traditional pastoralism. Dairy and crop farming, which forms a combined source of livelihood to 32% of the respondents, depend on some of the environmental services (pasture and water), which pastoralism also depends on thus laying ground for potential conflicts.

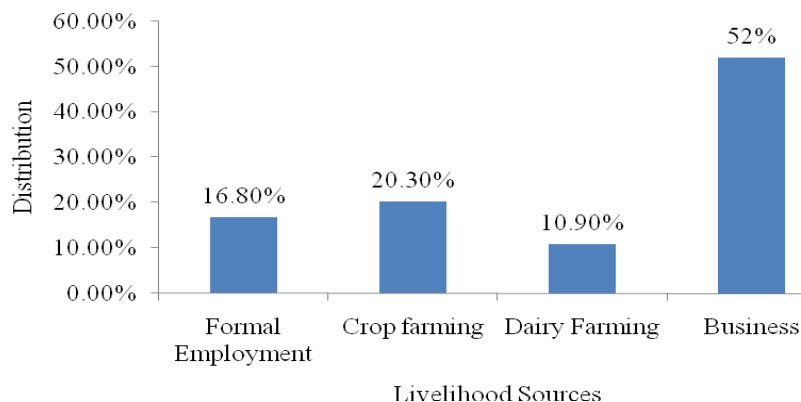


Figure 1: Respondents' Sources of Livelihood

Source of Livelihood and Ethnic Affiliation

Both members of the Pokot and Marakwet communities had substantial engagement in business as a source of livelihood with the former and latter having 47.4% and 58.1% respectively involvement. Crop farming is also another source of livelihood that was heavily pursued by the two communities though more of the Marakwets than Pokots considered it as a source of livelihood if results presented in figure 2 are anything to go by. Dairy farming and formal employment as sources of income were pursued exclusively by members of the Marakwet communities according to persons covered in this study. The absence of members of the Pokot community in formal employment does not in any way mean that no person from the Pokot community derived their livelihood from formal employment. The study thus attributes this to sampling error. However, members of Pokot community’s absence from dairy farming may be reflective of the community’s preference for pastoralism. Unlike Marakwet lands, which receive fair amounts of rainfalls, those of Pokot side experience longer periods of dry spell. The area is thus suitable for traditional pastoralism than dairy and crop farming. Favourable climatic conditions may have thus encouraged more members of the Marakwet communities to engage in crop farming and dairy keeping.

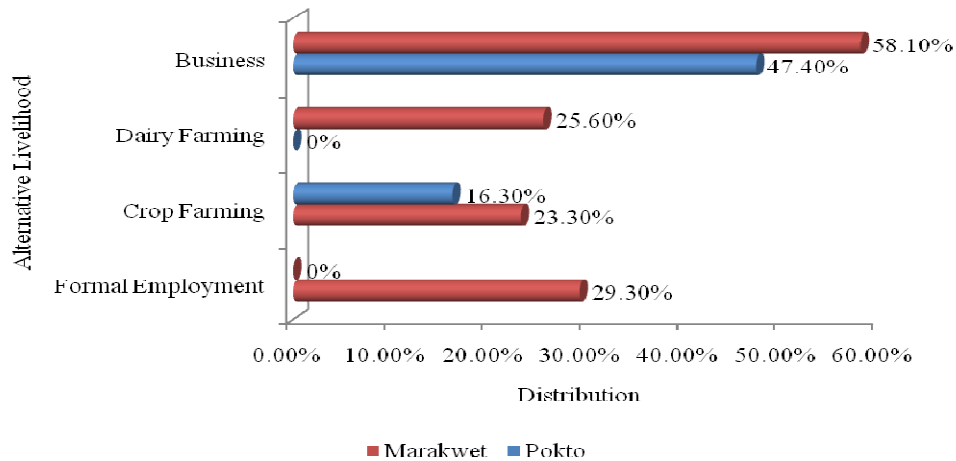


Figure 2: Sources of Livelihood by Ethnic Affiliation

Sources of Livelihood and Gender

From figure 3 below, it is clear that males dominated formal employment and business as sources of income. Formal employees among the study sample were males. Males also accounted for 51.6% of businesses compared to just 14% held by females. With regard to crop farming, females occupied 78.5% of crop farming activities against 40.9% held by their

male counterparts. Dairy farming as a source of income also had almost twice the number females compared to that of males. Teaching and civil service were the main source of formal employment in the study site. Education especially secondary education and above was a major qualification requirements in formal employment. Pastoralist communities including Pokot and Marakwet ones, still have few of their females with secondary and post-secondary levels of education. This in effect implies that very few (if any) females from the locality qualified for teaching and civil service jobs in the area. This leaves males as the main pool upon which workforce for the two formal employment sectors are drawn.

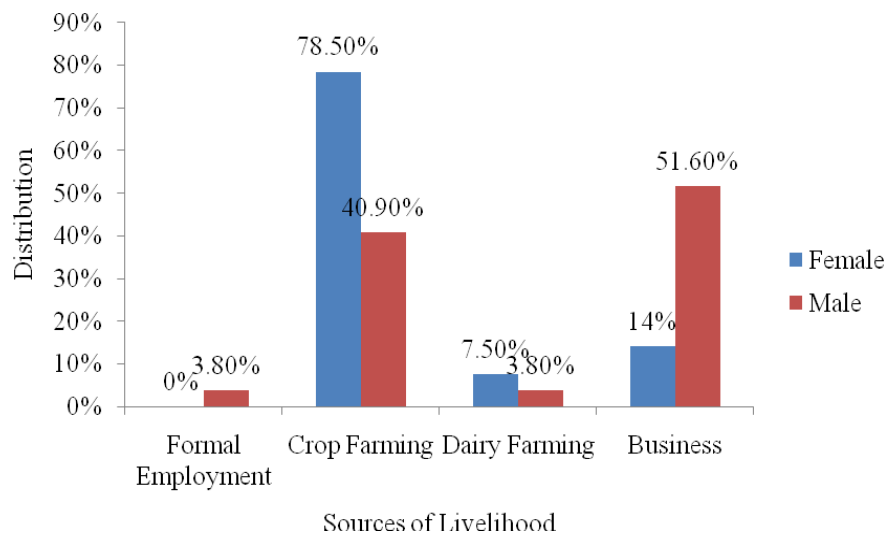


Figure 3: Sources of Livelihood by Gender

Sources of Livelihood and Level of Education

Table 4.4 below shows that a higher proportion of the respondents with post-primary education had formal employment as their main source of livelihood. Dairy farming as a source of livelihood was dominated by respondents with secondary level of education and below. A similar trend obtained for crop farming as a source of livelihood, where more of the respondents with secondary level of education and below derived their livelihoods from the sector. Business as a source of livelihood appeared to be favoured by all respondents not withstanding their levels of education.

Table 1: Sources of Livelihood by Level of Education

Level of Education	Source of Income				Total
	Formal employment	Crop farming	Dairy farming	Business	
No Education	.0%	87.6%	5.3%	17.1%	100.0%
Primary	2.6%	30.8%	38.5%	28.2%	100.0%
Secondary	16.0%	36.0%	20.0%	28.0%	100.0%
College	16.0%	44.0%	16.0%	24.0%	100.0%
University	57.1%	21.4%	.0%	21.4%	100.0%
Total	13.4%	48.6%	15.6%	22.3%	100.0%

Households Livelihoods Adaptation Strategies

Co-operative Livelihood Pursuits as an Adaptation Strategy

The engagement of several members of households was one of the strategies used by households in their adaptations to changing livelihoods. Some households in the study area had up to four of their members engaged in livelihood pursuit, even though majority of the households had only one of their members actively engaged in livelihood pursuit. Households that had only a single member pursuing livelihood accounted for up to 62.5% of the households surveyed. About 25.1% of the households surveyed had two of their members engaged in livelihood pursuit. Households with three and four of their members engaged in livelihood pursuit accounted for 10.5% and 1.9% of the households respectively as figure 4 below shows.

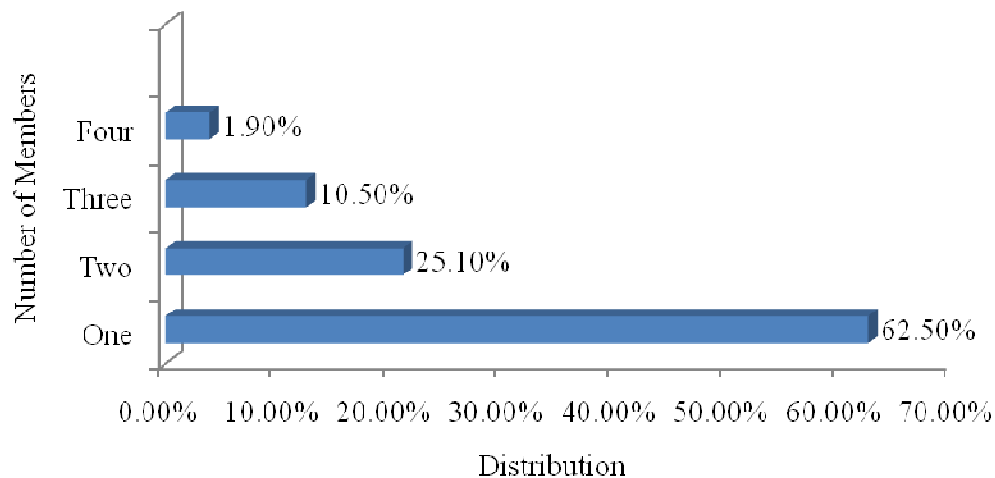


Figure 4: Number of Household Members Pursuing Livelihood

The need to have sufficient incomes to meet households' daily needs is perhaps the main motivation behind this livelihood diversification strategy. But such strategies are not only

used to boost households' incomes but also to spread risks in the event that the main bread winner is either lost through death or incapacitation. In a study of the sources of livelihoods for vulnerable households, Barret and Beardmor (2000) found out that among poor Indian households, women and children joined the labour force to cushion households from loss of income. It is also a common practice among the pastoralists for children to be used to look after cattle, which are the main source of livelihood for pastoralists. This then frees adults to engage in other productive income generating activities, whose rewards are used to complement those obtained from pastoralism.

Multiple Sources of Livelihood as an Adaptation Strategy

Engagement in multiple sources of livelihood was yet another livelihood adaptation strategy used by members of the Pokot and Marakwet who derived their livelihoods away from traditional pastoralism. Most of the respondents derived their livelihoods from more than one. Respondents who derived their livelihoods from two, three and over three sources represented 59.2%, 13.4% and 0.1% of the respondents respectively. However, 27.3% of the respondents reported that they had one source of livelihood as figure 5 below shows. Engagement in diverse sources of livelihood was another important socioeconomic strategy employed by both the Pokot and Marakwet communities in livelihood diversification. Informal discussions revealed that pursuit of livelihood from multiple sources was done within both formal and informal sectors. For instance, respondents pointed out that formal employees such as teachers and civil servants also owned retail shops in the locality. Similarly some members of the two communities, worked as night guards while by day traded charcoal, firewood and bee products.

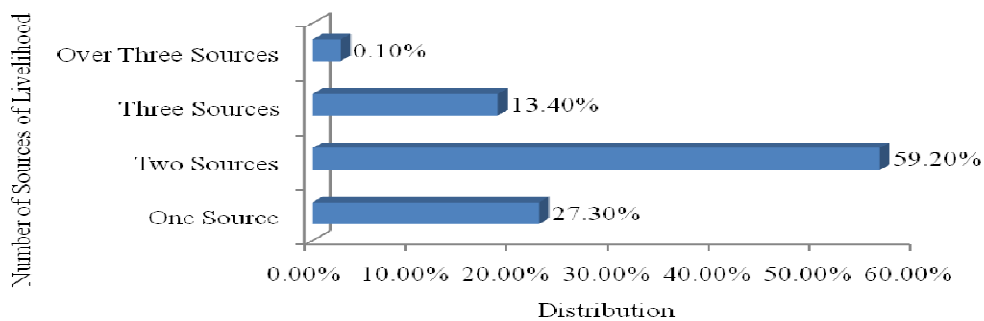


Figure 5: Number of Livelihood Sources per Household

Periodic Change of Livelihood Sources as an Adaptation Strategy

Respondents pointed out that they changed from one source of livelihood to another as a way of adapting to none pastoral sources of livelihood. Such changes of sources of livelihood were done from time to time depending on the prevailing socio-economic conditions. Majority or 39.6% of the respondents took as long as ten years before shifting from one source of livelihood to another. The study also established that 15.8%, 18.3%, 16.8% of the respondents changed from one source of livelihood to another after 8-10, 5-7 and 2-4 years respectively. However, some respondents indicated that they maintained the same source of livelihood for less than two years as figure 6 below shows.

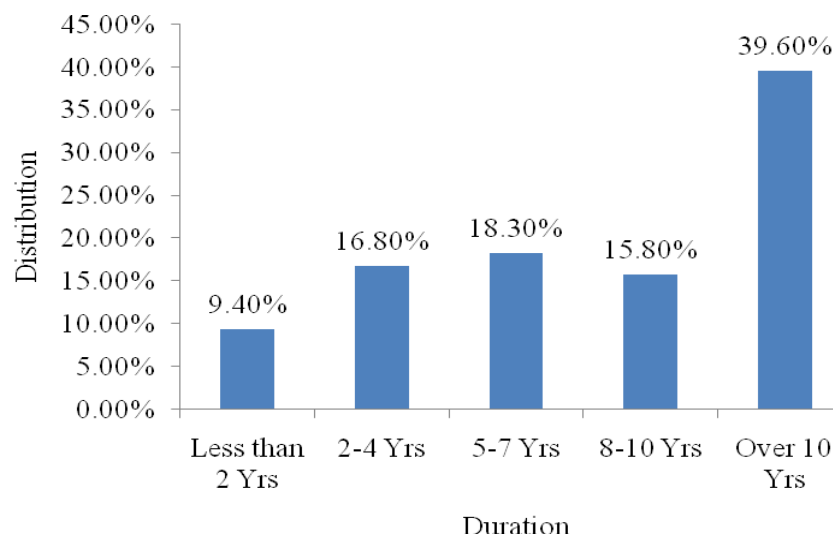


Figure 6: Duration for Change of livelihood Source

Changing from one source to another is a common practice among households undergoing livelihood transitions. Other studies have similarly reported periodic changes in sources of livelihood as situation demands from time to time. Ndagala (1992) Mung'ong'o and Mwamfupe (2003) have for instance, have found the Maasai community of Tanzania and Kenya moving to urban areas to work as night guards, entertainers in tourist resorts among other areas. They also trade in charcoal from time to time but they quickly change to other activities when forest authorities make their work difficult. Pastoralists thus respond to seasonal changes by adapting to appropriate sources of livelihoods to maximize and avoid risks as conditions dictate.

Reason for Change of Livelihood Sources

Flexibility in sources of livelihood was motivated by a number of factors. These included the need to avoid conflict, pursuing more rewarding livelihoods, diversify incomes and pursue those sources of livelihoods that were more certain. About 70.3% of the respondents cited avoidance of conflicts as their reasons for their flexibility in sources of livelihood. The need to diversify income, pursue more rewarding livelihoods and more certain sources of livelihood was pointed by 7.4%, 8.9% and 13.4% of the respondents.

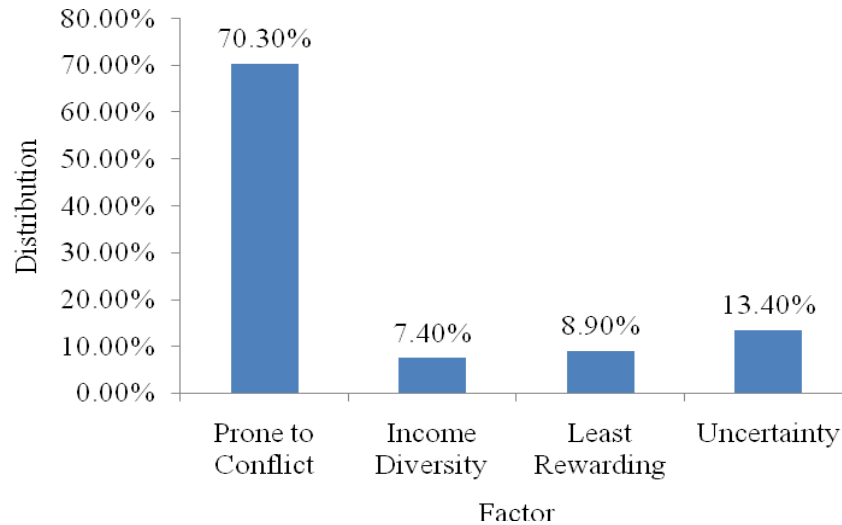


Figure 7: Reason for Change of livelihood Source

The current study has not only confirmed that indeed both Pokot and Marakwet communities are undergoing livelihood transformation, but also that these transformations have been occasioned by pull and push factors. The findings of the current study concur with other studies that have found the future of pastoralism a source of livelihood being uncertain. Demonstrating on the extent to which pastoral communities are being pushed away from their traditional sources of livelihood, Wisner (2009) points out population pressure, which has increased substantially thus contributing to a proliferation of unplanned settlements which block migration routes and encroach onto pastures. Annual population growth in Kenya's pastoral areas is estimated at 2.8%, and is expected to double the pastoral population every 25 years. Pastoral areas are particularly sensitive to such growth, as each pastoral household requires a minimum herd of 40 sheep/goats, and a few milking cows and/or camels to be food secure. Such increases in human and animal populations are difficult for the rangelands to sustain and create a variety of challenges.

While some members of these communities still practice pastoralism as a source of livelihood, they have over the years experienced low rewards accruing from pastoralism. This study has indeed noted in figure 7 above dwindling livelihood rewards compel some members of the two communities to from time to time shift to other sources of livelihood. This fact has been supported by Nori (2008) among the Borana Community. Nori (2008) found that daily milk yield among the Borana pastoral community declined from about 4 litres to 0.75 litres per cow within a period of 10 years. Similarly Wisner (2009) found that only 15% of pastoral communities were food secure. Further, pastoral communities are increasingly losing livestock to drought and diseases, while selling their animals at throw-away prices in the face of these calamities.

The Relationship between Sources of Livelihood and Conflict Situation

Sources of livelihood were measured at nominal level. The association between sources of livelihood and conflict situation was tested using Chi-Square. Associational test results presented in table 4.6 below shows that there was a significant association between sources of livelihood and conflict situation among Pokot and Marakwet communities. But this association was weak given Cramer’s V value of 0.354.

Table 2: Relationship between Livelihood Sources and Conflict Situation

Source of Livelihood	Conflict Situation				Total
	Reduced	Increased	No Change	cannot tell	
Formal Employment	100.0%	.0%	.0%	.0%	100.0%
Crop Farming	46.0%	20.7%	12.6%	20.7%	100.0%
Dairy Farming	100.0%	.0%	.0%	.0%	100.0%
Business	100.0%	.0%	.0%	.0%	100.0%
Total	73.7%	10.1%	6.1%	10.1%	100.0%

$\chi^2 = 0.67.398$, df= 9, p= 0.001, Cramer’s V= 0.354

Pursuit of alternative livelihoods such as crop farming is often instigated by pastoralist families who can no longer make a living from animal production alone and as a means of supplementing household food needs and diversifying their means of subsistence (Nori, 2008; Wisner, 2009). This subsistence strategy, however, often involves land grabbing and the land which is good for crops is also often prime grazing land located in the humid and wetter areas along valley bottoms and foot hills. A physical challenge, however, comes from the very reason for which pastoralism, rather than crop agriculture was established in these ASALs in the first place – the unpredictability of the environment. Because of the land used, crop

agriculture also interrupts seasonal livestock mobility and grazing availability, thus having a pronounced negative knock on effect to livestock feed security (Gizachew, 2008). Other alternative sources of livelihood such as charcoal, which this study established was being pursued by some respondents also had a direct bearing on the quality of environmental resources, which traditional pastoral activities depends on. Environmental degradation arising from deforestation (due to charcoal burning and wood fuel harvesting), all result in low quantity and quality of environmental resources. Destruction of few forests in pastoral areas by charcoal and wood fuel dealers results in low rainfall and loss of pasture land due to flooding. The short supply of the environmental resources due to unsustainable livelihoods leads to conflicts between agriculturalists and pastoralists. This partly explains why crop farmers pointed an escalation of conflicts between the two communities. It should be recalled that most of the crop farming is done by the Marakwet community due to the fact that their land is more arable.

Relationship between Number of Sources of Livelihood and Conflict Situation

Using Pearson correlations to test the relationship between number of sources of livelihood and conflict situation, the study established there was no significant relationship between the two. The analysis produced an ($P > 0.05$) and a negative correlation result, which suggested that the number of sources of incomes was negatively correlated to conflict situation. This suggests that pursuit of livelihoods from multiple sources resulted in fewer incidences of inter-ethnic conflicts. A closer examination of table above reveals that about 40% of households with one source of livelihood reported increased cases of ethnic conflicts between Pokot and Marakwet communities. About 26% of households with two sources of livelihoods reported reduced cases of ethnic conflicts. Similarly more households with three sources of livelihoods reported cases of reduced conflicts than those who reported increased cases of conflicts.

Table 3: Livelihood Diversification and Conflict Situation

No. of Livelihood Sources	Conflict Situation				Total
	Reduced	Increased	No Change	Unable to tell	
1	.0%	40.0%	.0%	60.0%	100.0%
2	26.0%	20.0%	20.0%	34.0%	100.0%
3	26.9%	16.2%	25.8%	29.0%	100.0%
Over 3	12.0%	20.0%	20.0%	48.0%	100.0%
Total	12.4%	22.3%	23.1%	32.2%	100.0%

$r = -0.039, P = 0.334$

The relationship between periodic change of Sources of livelihoods and conflict situation

This study measured duration of livelihood at interval level, with Pearson Correlations used to test the relationship between livelihood duration and conflict situation. Results in Table 4 suggest that there was a significant relationship between the duration of livelihood pursuit and conflict situation between Pokot and Marakwet communities. This conclusion is arrived at following test results ($P > 0.05$). The study, however, wishes to point that given the positive value of r , that there was a direct relationship between the duration of pursuit of alternative sources of livelihood and conflict situation between Pokot and Marakwet communities.

Table 4: Periodic Change of Livelihood Sources and Conflict Situation

Duration of New Livelihood	Conflict Situation				Total
	Reduced	Increased	No Change	Unable to tell	
< 2 Years	100.0%	.0%	.0%	.0%	100.0%
2-4 Year	47.1%	.0%	.0%	52.9%	100.0%
5-7 Years	100.0%	.0%	.0%	.0%	100.0%
8-10 Years	100.0%	.0%	.0%	.0%	100.0%
Over 10 Years	63.8%	22.5%	13.8%	.0%	100.0%
Total	76.7%	8.9%	5.4%	8.9%	100.0%

$r = -0.112$, $P = 0.002$

The current findings resonates well with Wade’s (1992) arguments that land transformation by human activity-deforestation, conversion to cropland and pasture, and other modifications – , which now involves over 40% of the terrestrial globe and that repeated use of initially good land for agricultural purposes may deplete the soil of its nutrients leading to infertility. Livelihood activities such as crop farming require land clearing and conversion of previous grazing lands into agricultural farms. Further, many years into crop farming may also mean conversion of more grazing lands into farmlands thus further restricting pastoral activities to smaller and smaller areas. This may result in initial discontent among livestock keepers if unchecked conflicts between livestock keepers and crop farmers. The situation would be worsened if crop farming is largely under irrigation as additional crop farming would imply larger supplies of water to crop fields normally at the expense of livestock. A further reason for the escalation of conflicts as more years of crop farming go by is found in Dahal *et al.*,’s (1994) observation, which holds that farmlands are not equitably distributed around the world. As years into alternative sources so do the socioeconomic values of the resources being exploited is discovered. Many years into say crop farming will not only imply that more acreage of land being put under cultivation but also the emergence of a powerful clique of crop farmers. This group will use all possible avenues to annex more farmlands for

cultivation thus excluding other land users. Conflicts will therefore inevitably rise due to this increased alienation. Different conflict fronts will emerge those pitting crop farmers amongst themselves, and those between crop farmers and livestock keepers. This study therefore attributes the direct relationship between duration of pursuit of alternative livelihoods and increased incidences of conflicts to increased expansion of farmlands, land alienation and loss of quality and quantity environmental services.

Conclusions

The pursuit for alternative sources (away from traditional pastoralism) of livelihood would prove useful in lowering incidences and intensity of conflicts between Pokot and Marakwet communities if well implemented and managed. Otherwise unfocused pursuit of livelihood through the exploitation of resources such as land and water, which incidentally are highly demanded by pastoralism as a source of livelihood may exacerbate rather than reduce ethnic conflicts between the two communities.

Recommendations

The current study was concerned that persons/groups pursuing livelihood from different sources often perceived each other as competitors. This study noted that most of these alternative sources of livelihoods may have been adopted without undertaking adequate considerations of their possible negative impact to already existing sources of livelihood. The study recommends for better training in the fields of livelihood especially the complementarily role of diverse sources of livelihoods. Such trainings could even enable say livestock keepers to have working arrangements to harvest crop residue for animal feed or graze in fallow farms between seasons. Similarly crop farmers could consider livestock keepers as potential sources of organic manure and animal driven farm machineries. Pastoral resources where conflicts have been witnessed are pasture land and water resources. Diversion of water channels by some groups and individuals especially from crop farming was done without due regard to other water users notably pastoralists. Since water is essential to both crop farming and pastoralism it becomes necessary for authorities in the water and agricultural sectors to intervene and help communities come up with a comprehensive resource sharing mechanism.

REFERENCES

1. Aboud, A. A. and Suudiya A. A. (1994) Attitudes, Perceptions and Development of the Pastoral Areas of Northern Kenya. A Paper presented to the symposium on the Sustainable Development of North Eastern Kenya. Held at Sarova Shaba Hotel, Isiolo, Kenya.
2. Babbie, E. (1986). *The Practice of Social Research*. Belmont: Wadsworth Publishing Company.
3. Barret, A. and Beardmor, R. (2000). 'Poverty reduction in India: Towards building successful slum upgrading strategies.' Discussion paper for Urban Futures 2000 conference, Johannesburg.
4. Barth, F. (1973). "A General Perspective on Nomad-Sedentary Relations in the Middle East", in C. Nelson(ed), *The Desert and the Sown: Nomads in the wider society*, Berkeley Institute of International Studies, University of California, Research Series No. 21.
5. Birch Izzy, Shuria Halima. 2001. *Perspectives on Pastoral Development. A Casebook from Kenya*. Oxfam 2001. London.
6. Bonfiglioli A. and Watson, (1992). *Pastoralists at a Crossroads. Survival and Development issues in African Pastoralism*. NOPA. Nairobi.
7. Dahal, D. R., (1994) "A Review of Forest User Groups". Case Studies from Eastern Nepal: Kathmandu, Nepal; ICIMOD
8. Gizachew, L. (2008). Status of Feed Resources in Arid and Semi-Arid Lowlands of Ethiopia. In *Proceedings of Sub-regional workshop on Managing East African Rangeland for better response to feed crises*. FAO: Addis Ababa.
9. Hendrickson, D., Armon, J. and R. Mearns. (1998). 'Conflict and Vulnerability to Famine: Livestock Raiding in Turkana, Kenya.' *Drylands Programme Issues Paper no. 80*. London: International Institute for Environment and Development.
10. Mung'ong'o, C and Mwamfupe, D. (2003). *Poverty and Changing Livelihoods of Migrant Maasai Pastoralists in Morogoro and Kilosa Districts, Tanzania*. Dar es Salaam; Mkuki na Nyota Publishers.
11. Ndagala, D. K. (1998). Tanzania. In C. R. Lane (ed.), *Custodians of the Commons: Pastoral Land Tenure in East and West Africa*, London: Earthscan Publications Ltd. Pp. 150-168.
12. Niamir, M. (1990) *Four Topics from Dr. M. Niamir: A Paper Presented to the 6th Regional Workshop on Pasture Management for East Africa; Held at Egerton University, Njoro, Kenya*.
13. Nori et al. (2008). Browsing on fences. Pastoral land rights, livelihoods and adaptation to climate change. IIED issue paper no. 148.
14. Rigby, P. (1992). *Cattle, Capitalism and Class*. Philadelphia: Temple University Press.
15. Wisner, B. et al. (2009). *At Risk: natural hazards, people's vulnerability and disasters*, London: Routledge.